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CAMERA CRAFT

A Photographic Monthly

George Allen Young, Editor

Volume XLVI January to December, 1939

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CAMERA CRAFT



"Yucca, Mojave Desert 1937"

Edward Weston

January 1939

WHAT IS A PURIST?

CONCERNING CHAMPLIN 16

ARCHITECTURAL PHOTOGRAPHY

PRICE 25c

Edward Weston

Harry Champlin

Ken Hedrich

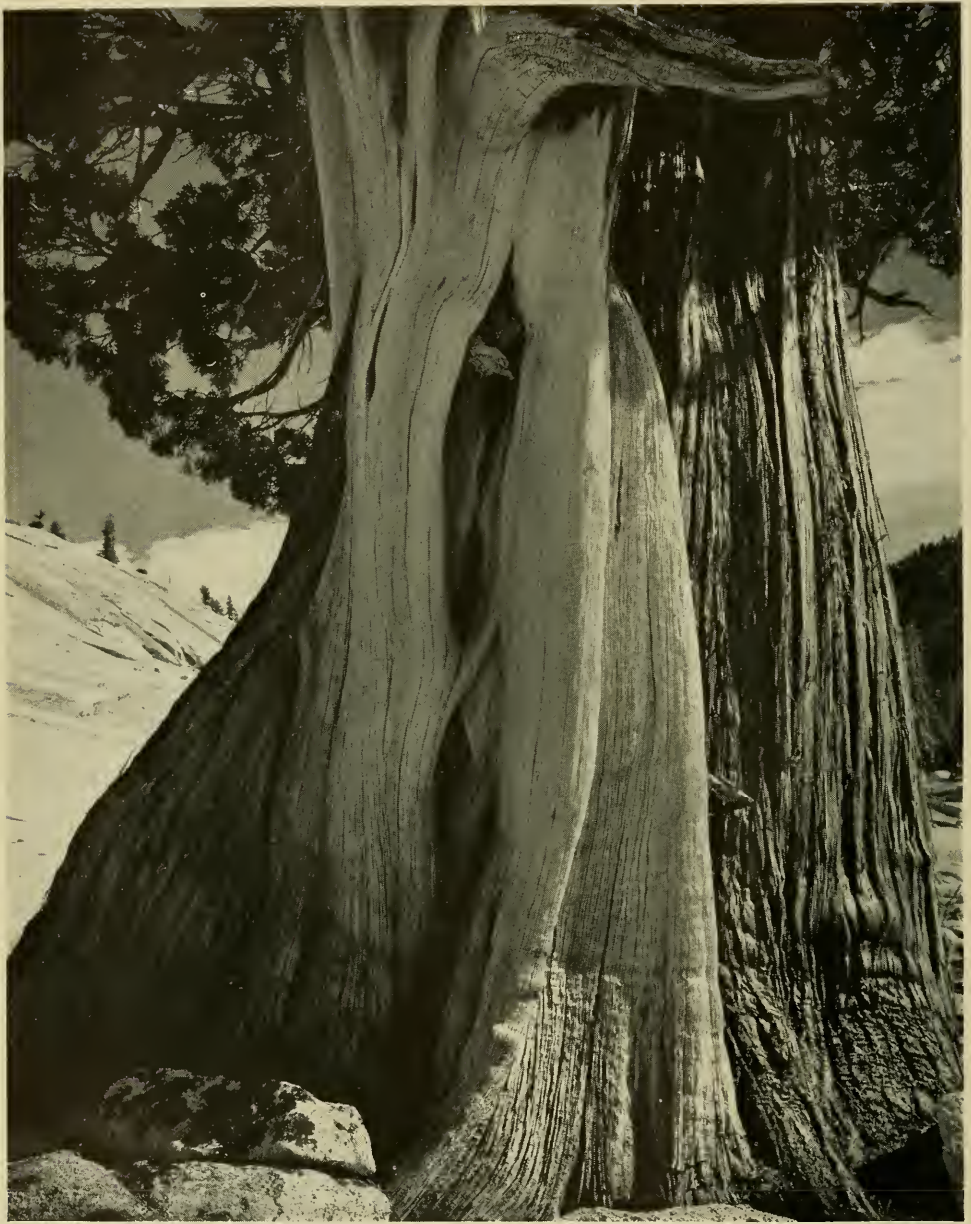


WILLIAM MORTENSEN

NOT BY THE MASS PRODUCTION METHODS OF ORDINARY CLASS WORK . . . BY THE CAREFUL PERSONAL AND INDIVIDUAL TRAINING OF A RESTRICTED NUMBER . . . PATTERNED ON THE TEACHING METHODS OF THE MASTERS . . . WILLIAM MORTENSEN INSTRUCTS HIS STUDENTS IN PICTORIAL AND PORTRAIT PHOTOGRAPHY.

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MORTENSEN SCHOOL OF PHOTOGRAPHY
LAGUNA BEACH CALIFORNIA



"Juniper," Tenaya Lake, 1937

Edward Weston

What Is A Purist?

Edward Weston

A PURIST, to the best of my knowledge, is a mythical creature. At least I have never known a photographer who entirely fitted the popular definitions of a Purist. Since these definitions are usually supplied by Pictorialists, who quite naturally suspect the worst, the Purist Mythology has become top-heavy with such misconceptions as those to be found in the article ECLECTIC PHOTOGRAPHY by Paul Louis Hexter. (Camera Craft, September, 1938.)

Let it be clear at the start that I intend no attack on Mr. Hexter; regarding the way of the Purist he has only reiterated the slogans that countless others have employed and polished. I am not "answering" his article: I chose to use it as a basis for my comments simply because it happened to contain, in short concise statements, almost all of the popular Purist bogies.

I am sure all Purists have some impurities, but as they may not have the same ones I have, it would be unfair for me to attempt to speak for the "Purist Party." Therefore, in what follows, it should be understood that I am speaking only for myself.

It is my misfortune to be called a Purist. I hope now, once and for all, to disown the title. The specifications for Purists that are so frequently put into print stink of pedantry, and above all things I am not pedantic about photography. If by printing on a sensitized door-mat I could produce something finer than either photography or painting, I would certainly do it. It so happens that to date I have found no way to achieve that beauty which is uniquely photographic except by using photographic methods.

Here are the six essential points made in ECLECTIC PHOTOGRAPHY to define the Purist:

1. He works out selection, emphasis, and exaggeration before making an exposure, after which "processing and finishing are entirely mechanical and focussed on the preservation of maximum gradation and tone separation."

2. The ideal print for the Purist is "an uncontrolled glossy, for this gives maximum separation between black and white."
3. "The Purist, bound by his belief, in the sin of changing any value or tone, prints it (his negative), as is, on glossy paper and shouts down all criticism of such a print on the basis of intellectual appreciation."
4. Retouching is a word that causes all Purists to see red.
5. "The Purist, by omitting control of tone values in making the print, discards much of what has come down on the subject of composition in 500 years of work in other arts."
6. "For the Purist, sector analysis and naive good taste are the extent to which he allows the principles of picture composition in the other arts to effect photography."

I shall begin by saying that not one of these statements is true of me.

First, Mr. Hexter is right in saying that selection, emphasis, and exaggeration must (through camera placement, lighting, and correct angle) be worked out before exposure; wrong in implying that this is all that must be worked out. It is only the beginning. The photographer should also know before exposure just what kind of negative he wants, how he will develop it, and what kind of print he will make from it. Every step which will be taken from the time the shutter is released until the print is made should be predetermined.

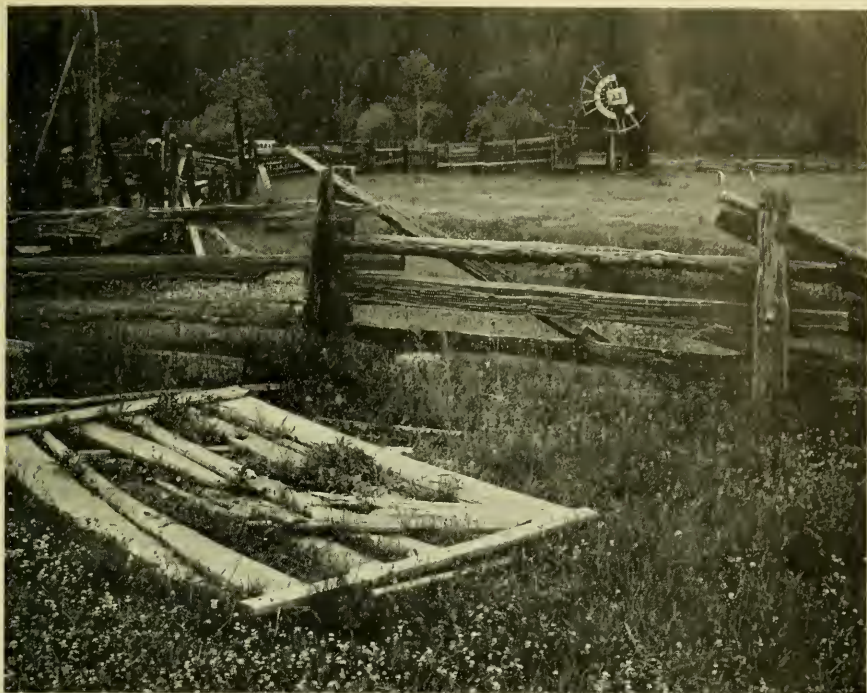
I have often said the photographer should see *his finished print on the ground glass*, which is simply to say he should know exactly what he is doing. He should be so familiar with his chosen tools that their use is second nature to him. He should see and think in terms of the focal length of his lenses, the effects of his filters, the emulsion of his film, the scale of his paper.

Processing and finishing cannot be mechanical. Even in the case of a straight print it is incorrect to say that no control is exercised. The lowliest amateur exercises control in his method of developing, choice of developer, method of printing, and choice of paper. The only photographers who do not exercise any control are those who have their work finished for them, in which case the Corner Drugstore does the controlling.

Developing and printing should be a reasoned carrying out of the original conception. I much prefer to make a negative from which I can make a straight "uncontrolled" print, but this is not always possible. Nature can show a longer scale than that of any photographic emulsion. When this happens the decision must be made as to which end of the scale to neglect, which to emphasize—a decision that should be made before exposure and carried out in developing and printing.

All of my negatives are controlled by slow development, with inspection. My prints are controlled, when necessary, by printing down and holding back.

Quotation 2 assumes that the ideal print for the Purist has maximum separation between black and white. Sometimes I want maximum tone separation, often decidedly not. This very naturally depends on the individual picture. In any case I am not concerned with trying to copy nature, or trying to reproduce "correct values." Quite often, for emphasis or emotional impact, I allow a shadow to go black. Sometimes the blacker the



"Meyers Ranch, Yosemite 1938"

Edward Weston

better. But at other times a suggestion of detail in the shadow may be desirable, when to get it in the negative would mean overexposure of the highlights and consequent degradation. The remedy is an exposure long enough to get some deposit in the shadows and subsequent holding back of these shadows while printing for the highlights (which have been fully developed for brilliance).

I have said enough to show that I use control after exposure as well as before. But I must emphasize that I use it only to carry out my original idea. Control should never be a corrective for poor original seeing.

Now comes the question of retouching—a word to make Purists see red. No film holder, or camera, is absolutely dust-proof. Try testing the best in a desert windstorm. Unless the photographer can afford a super-air-conditioned darkroom, lint and dust will inevitably settle on his printing frame. And even the most careful worker gets accidental scratches. I spot out dust specks on negatives and prints. I fix scratches when the work can be done without destroying photographic quality. Technically, that is retouching. On rare occasions I have even removed a tiny but disturbing highlight in a landscape. Ninety-nine times out of a hundred I can avoid such troubles when I make my exposure. If I can't the hundredth time, and if it can be removed from the negative without destroying photographic quality, then I take it out.

One element of control the aforesaid article did not mention is trim-



"Ansel Adams' Darkroom, Yosemite 1938"

Edward Weston

ming. And in this I admit I am a "Purist". I can't recall a single print from over a thousand negatives made last year which I trimmed to change my original seeing. Obviously this is an important part of seeing your finished print on the ground glass. (However, it must be understood that if I saw a subject I wanted to do that would not fit the 8" x 10" size of my ground glass, I would do it, and trim.)

I brought up this matter of trimming because Mr. Hexter thinks that Purists know and care nothing about composition since they don't do any fussing with their negatives and prints. The limit he allows them is "naive good taste" and a knowledge of "sector analysis." I know and care a great deal about composition, though I admit I don't know what "sector analysis" is. I don't know the rules of composition and I don't know the lingo because I have gained my knowledge through work and observation. Pictures came first. Rules followed. No one ever became an artist by learning rules or keeping them. It takes a good deal more than that. A man might be a demon at composition and still have nothing to say.

A Purist who is going to get any results has of necessity to know a great deal about composition. The manipulator can stick some clouds in a vacant sky, paint out a couple of houses, move the gate from the right to the left end of the wall, and remove the telephone wires, to get his "composition" right. But the Purist must do all this before he makes his exposure! That is, he must see his subject just as he wants it to appear in his



"Aspens—New Mexico 1937"

Edward Weston

finished print, he must consider the relationships of every value and every detail—he must rely on a keen sense of composition before exposure, rather than manual dexterity in subsequent procedures.

Many people think that Purists start with intellectual premises and have technique as their end. Mr. Hexter says that (having printed his negative as is on glossy paper) the Purist "shouts down all criticism of such a print on the basis of intellectual appreciation."

Again I am speaking only for myself when I say that my work is never intellectual. I never make a negative unless emotionally moved by my subject. And certainly I have no interest in technique for its own sake. Technique is only the means to an end. If my technique is adequate for my seeing, that is enough.

In the catalogue for the 5th International Salon of the Pictorial Photographers of America I find the following descriptions:

"PICTORIAL SECTION . . . a term applied to the making of pictures . . . of beauty, originality, and of artistic self-expression as distinguished from mere record photography. It is usually applied to pictures made for the pictures' sake, pictures inspired by the æsthetic sense of the photographer."

"MODERN PHOTOGRAPHY . . . sometimes referred to as Basic or Pure Photography . . . the work of those sincere photographers whose interest



"Clouds Over Panamints 1937"

Edward Weston

lies in making a faithful record of the thing photographed, with due attention to detail and texture, and who limit themselves to the straight photographic process in so doing."

From what I have said it will be clear that of these two definitions the pictorial one fits me better. And yet I am known as a Purist. I am not the only misfit—I know of "Purists" who use matt paper and "Pictorialists" who are really straight photographers. Neither term has any definite meaning.

However there are two species of workers calling themselves photographers. The basic difference between them is this: one group is striving to combine photography and painting in its processes and in its results; the other group uses only photographic means and is striving for purely photographic results. There are other differences, of course—people cannot be neatly pigeonholed—but this it seems to me is the fundamental dividing line.

The workers who manipulate, draw on their negatives, print through screens, who try to make their prints look like etchings or drawings or paintings can be very simply designated as Photo-painters. Since they are borrowing from both mediums it seems the clearest way to define them. That would leave the term "Photographer" free of qualifications for all those "Pictorialists", "Purists", "Basic Photographers", "Real Photographers", "Straight Photographers", etc., who use photographic means to achieve photographic results.



"Red Rock Canyon 1937"

Edward Weston

I have always disliked being called a Purist, not only because it was a misleading term, but because it sounds unpleasantly sanctimonious. It recalls to me a line from Samuel Butler's prayer,

"O Lord . . . deal with the seen sins first . . . leave me a few,
I would not be—not quite—so pure as You."

The difference between the Photo-painter and the Photographer is a matter of psychology. If Mr. Hexter aims to get these two beings combined in one he has set himself an impossible task. The Photo-painter may seem to be a photographer at some stages of his process, but he never really is. If by accident he made a perfect negative for straight printing he would be unable to leave it alone. For at heart he believes that a negative printed with no trace of his own handiwork would be a soul-less, mechanical affair. The negative is to him what the first rough sketch is to the painter, something to be worked up into a real picture.

The Photographer's psychology is very different. For him there is no substitute for photographic beauty. He believes that handiwork which hides or destroys this beauty is a violation of the medium. Therefore, he strives to make perfect negatives, negatives that contain everything he wants in his prints. He perfects his technique for the same reason a pianist practises—that through complete mastery of his chosen tool he may better express what he has to say.*

*Announcement of a Weston exhibit in Chicago will be found in Club Notes dept.- Ed.

Architectural Photography

Ken Hedrich

(Ken Hedrich is head of Hedrich-Blessing studios of Chicago. His organization specializes in architectural and industrial photography and ranks at the top in its field. Publications in which Hedrich-Blessing work appears includes Architectural Forum, Architectural Record, House & Garden, Better Homes & Gardens, etc.; as well as practically every foreign architectural publication in the world. There are few competitions in architectural photography which haven't found Hedrich high among the winners. In the following article Ken Hedrich points out why many amateur works fail to make the grade and gives an expert's suggestions on how to remedy these flaws.—EDITOR'S NOTE.)

HE who photographs a building or any of its individual features is sharing his creative ability with another type of artist, the architect. His success as an architectural photographer is directly proportionate to his ability to capture the spirit of the building as created by the architect. So before taking a shot of any structure—study it! Ask yourself what the architect intended to convey, how the lines sweep, what is the theme of the building, how it may be shown in its best light?

Any well designed building is a work of art with a definite spirit. Far too many amateurs lose this spirit by selecting the wrong angle, poor lighting, and (that major fault of 99 per cent of the amateurs) distorting the shape of the building.

We see in far too many amateur prints vertical lines, that should be photographed as straight, lurching obtusely in drunken directions; interesting angles forever lost by selection of the wrong point from which to photograph; rough surface textures appearing a washed-out even color because of haste in selection of lighting; unbalanced composition; and

buildings standing starkly alone with nothing on the print to give us some comparison of size.

Let's see how we can remedy some of the more common errors. We'll assume that the camera has a rising and falling front, a ground glass back, and that it is equipped with a tripod. These features are far more important to the architectural photographer than a lightning-fast lens.

The members of our studio always use a marked ground glass as insurance against distorted corners, optical illusions and poorly balanced negatives. The marking is in a series of evenly spaced parallel lines running both horizontally and vertically. These markings are invaluable as guides by which the vertical lines of buildings may be maintained. They help further to show just where any given part of the subject will be located on the given print, taking much eye-measurement and guess work out of photography.

Another important point to watch in architectural photography is the lighting. In working with buildings we encounter problems we do not meet in studio work. Artificial lighting is difficult because of the size of the space that must be flooded. Then too a single powerful light source avoids conflicting shadows. Therefore we are usually forced to depend on the sun for lighting.

Since this is a factor entirely out of our control, we must study exterior conditions over an extended period of time, making notations of the angle of the sun on various sides of buildings at different times of the day and year. With this information available—and, once compiled, it can be used for many subjects in any given section of the country—we can plan our photograph.

One of the examples of lighting difficulty which an architectural photographer encounters is that the sunlight touches on the north exposure of a subject only early in the morning or late in the afternoon and then only between May and August.

Selection of the time for shooting is often contingent on the nature of the architecture. If it has a heavy, overhanging roof which casts shadows when the sun is high, the photograph is taken either early in the morning or late at night, depending on the direction in which the side to be photographed faces.

Sometimes we have the problem of the lighting being directly reflected by the wall, burning out the texture of the surface material. "Catch" lighting is a good means of preventing this loss of texture. "Catch" lighting is formed by the rays traveling from the light source striking the subject at a sufficiently sharp angle to produce shadows which throw the exterior building material into relief and reveal interesting details.

In photographing architecture which has artificial illumination at night, we often find the electrical lighting fails to give us an outline of the structure and causes excessive halation about the light sources. To checkmate this we use both daylight and artificial illumination to light our subject.

First we expose the exterior at dusk, making sure that the negative is far under exposed. The camera is then left set until total darkness sets in,



Figure 1

at which time we flash in the night lighting. This gives us a wider range of detail, shows sharper outlining of the light sources, modifies the dense, empty blackness that would otherwise be predominant in the print and on the whole gives us more satisfying results. (See Figure 1.)

We must depend almost entirely on lighting for the impression of a third dimension. If the light is directed at a corner and we aim our camera in the same direction, the corner stands an even chance of being lost, with the two meeting walls flowing into each other on the print. Each of the planes photographed should have a different tone shade. Certainly no two adjoining surfaces should be of the same shading. Select a point for the shot from which separate elevations are stepped out from each by the lighting.

For full exterior work two sides of the building should be shown to give the feeling of depth. Never photograph the flat face of a single side of any structure, unless working for a specific detail.

Selection of the right angle for lighting and dimensions and marking of the ground glass to avoid inartistic distortion are two of the "musts" for photography of this sort. A third is the correct insertion of additional details in the picture.

Each shot should have an object for comparison in it to give some con-



Figure 2

ception of the size of the building. If it's a tiny bungalow, a towering tree nearby will do. If it's a gigantic office building, the dwarfed people at its foot serve this purpose. All the general rules of composition enter in, too. One mass should be contrasted with another. If necessary work a tree, shrub, or fence into the foreground to furnish this balancing or contrasting mass.

Sometimes the architect has planned the building to be closely guarded by trees and shrubbery. Study the location of these plants and bring them into the picture as artistically as possible. Of course, every building is different and brings with it its own problems. (See Figure 2.)

The sky in the background is frequently made a more valuable background in the photograph by the use of a filter. A white building front stands out sharply against a darkened sky and the beauty of its lines is more readily discernible. (See Figure 3.) Clouds often add majestic beauty to a building. (See Figure 2). Sometimes a photograph is better composed when a dark upper portion is used. For these reasons it is wise for the amateur to equip himself with a red or orange-red (A) filter, a green (X-1) filter and a yellow (K-2) filter.

Do not use the red filter on a deep blue sky or the sky will appear totally black. It is best to become acquainted with the proper time for



Figure 3

using these filters by both studying their effect on the ground glass image and looking at the sky through them. As time goes you'll find your familiarity with filters, as well as the size of your collection, steadily growing.

In photographing architecture remember you are not stopping a bullet in its flight. With few exceptions the subject is immovable, therefore speed is not necessary.' Take advantage of the sharper focus and greater depth you can thus obtain by stopping your lens down. Make every brick and shingle stand out. It is seldom that artistic fuzziness increases the beauty of a building.

Occasionally it is possible to secure an interesting effect by deviating from the rule of perpendicular vertical lines. This is only true when photographing a skyscraper or similar tall mass. Results achieved in this way may give you interesting abstractions or compositions which can be used to good advantage for amateur exhibits but they are not considered to be true architectural interpretations. (See Figure 4.)

It is best to avoid tricks and faking in this type of work. Architectural photography is a realistic thing. So, to be a true architectural photographer, make the building's photography a beautiful reproduction of the architect's dream as he first sketched it on paper.

We frequently receive assignments to photograph single details of



Figure 4



Figure 5

buildings, a cornice, a doorway or a French window, for example. When necessary, we can employ artificial lighting for these smaller details. Here it is again imperative that the lighting be such that it shows all angles and surface variations. It is also important that part of the surface architecture be included in the shot to give the subject the appearance of being a part of a greater unit and to show with what surfacing material the detail was used. (See Figure 5.)

The same technique as that for night shots is used in shooting room interiors. Flood lights are concealed behind various doorways and arches and furnish the basic illumination of the room. During a two minute exposure of an interior the light fixtures are turned on for about fifteen seconds. Thus halation is lessened and the effect is that of the lighting coming from the fixtures. Care must be exercised in the placing of the floodlighting to avoid tell-tale shadows.

Most interiors are shot through doorways or windows when wide-angle lenses are not available. These openings are often used as a frame to tie the shot together and convey the impression that it includes only a part of the room. If a door opening onto another room is in camera range, opening this door will further the impression of depth. Lighting should be weaker or brighter in the farther room to give desired variation in tone shading.

Most rooms appear overcrowded when photographed, so it is often necessary to remove several pieces of furniture, sometimes as much as half. The remaining furniture is carefully balanced for composition and to make



Figure 6

the room appear larger. The room should be given the appearance of maximum depth. This effect is furthered by concentrating light at the end of the room farthest away from the camera. The foreground is thereby softened and the dark base helps prevent the eye from running out of the photograph. The light sources should be as few as possible to bring out all the angles and values in the structure of the interior and to give the finished work a maximum of simplicity. (See Figure 6.)

In printing our shots, we resort to underdevelopment for details in highlights. If you use a D-72 solution, give the negatives only about two-thirds normal development. For other developers a proportionately shortened time should be used. With this soft development you can control the degree of contrast more easily by selection of the right papers.

By using #2 or #4 developing papers you will find it easier for you to burn through the highlighted portions of the negatives without creating excessive contrast than when they are given their full developing time. A rheostat on your enlarger will be valuable in helping you gain control over the light strength for the density of the negative and the paper you are using.

Now let's go out and see what we can do in making an artistic, architecturally correct photograph of the old homestead!

Concerning Champlin 16

Harry Champlin

THE greatest question arising out of the introduction of Formula 16 concerns the sodium sulphite solution. Many people have asked me and many people have written to find out how a 10 per cent sodium sulphite solution is made.

In order to be scientifically exact it would be necessary to weigh both the water and the sulphite, but the solution required for use with Formula 16 does not have to be scientifically exact. You can, if you wish, take approximately nine level teaspoonfuls of sodium sulphite and dissolve it in water and bring the total volume up to 32 ounces. Or you may use $3\frac{1}{4}$ ounces of sodium sulphite, dissolve it in water and bring the volume up to 32 ounces. If you develop many films it is a good idea to make up a stock 10 per cent sodium sulphite solution. However, it is not a good idea to make such a solution if you intend to keep it two or three months. Sodium sulphite oxidizes and changes to a sulphate, and the sulphate is useless.

Now, the quality of the sodium sulphite should be beyond question. The sodium sulphite used in all of my experiments is of reagent quality. Many of the large chemical manufacturers make a reagent grade of this chemical. Again let me insist that you use reagent quality of sodium sulphite when compounding Formula 16. Some grades of sodium sulphite contain impurities in the form of free carbonates. Carbonates are alkalies and alkalies are not recommended for use with any fine grain developer. They soften the gelatin to some extent and what is more important, very seriously affect the grain structure of the negative.

One of the outstanding features of Formula 16 concerns its ability to build up a highlight to a certain point and then cease developing action upon that highlight. This means that there is a greater latitude in developing

time than has heretofore existed. In other words, it is possible to give the normal exposure recommended and develop for less than the recommended time without affecting the gradation of the resultant negative, within limits. It means also that the exposure time can be speeded up and coupled with a longer developing time, a normally graded negative will likewise result. This differs in degree from the action of ordinary developers which have a flattening effect upon a negative with decreased developing time and a contrast effect upon a negative with an increased developing time. There is, then, great latitude with Formula 16. The developing times recommended for this developer are the maximum permissible for miniature camera work. By maximum is meant that no more shadow detail will appear if developing times are prolonged beyond the times given. The maximum developing times are for use with the minimum exposures recommended for the negative material. If the exposure time is decreased to the average recommended, the developing times should be decreased from 10 to 15 per cent less than the times given. If the minimum Weston ratings are used so that the negative material receives relative longer exposures, then it is possible to decrease the developing times as much as 40 per cent without affecting the brilliance and gradation of the resulting negatives.

A long series of tests with the complete range of temperatures recommended with Formula 16 have shown that the best temperatures are those between 72 and 80° F. There is always one best in everything and these temperatures prove to be best for Formula 16.

Grain structure is naturally affected by the length of the developing time. The times given for maximum exposures will also give the largest grain structure. Any decrease from these times will show a material decrease in the size of the grain structure. In any event, the grain structure is not of serious moment because it is very fine! Then, too, the resolving power or ability to show minute details is greater with this developer than with any other so far tested. In other words, negatives developed in Formula 16 will have more apparent sharpness than has heretofore been possible.

The hardening effect given by Formula 16 is sufficient for all ordinary conditions. Negatives developed will be free from reticulation and other temperature defects without the use of any intermediate rinse bath compounded for this purpose. In fact, the use of chrome alum or sodium bisulphite with negatives developed in Formula 16 is vigorously discouraged because both of these chemicals have a detrimental reaction upon the effect given by this developer. This means that the ordinary packaged acid hypo which often contains sodium bisulphite should not be used. The very use of a fine grain developer proves that you are actually interested in superior results and you should not limit yourself to a fine developer and then follow this with an ordinary fixing bath. You should use the best fixing bath obtainable and this fixing bath should contain in addition to the regular hypo salt, sodium sulphite, acetic acid and potassium alum. If you do not have the necessary equipment for weighing the chemicals yourself, you can use either the Champlin Liquid Hardener or Velox Liquid Hardener

in combination with plain hypo crystals. If you mix your own solutions, you should use the Eastman formula, F5. The formula is as follows:

Acid Hardening Fixing Bath
Eastman Formula F-5

	<i>Avoirdupois</i>	<i>Metric</i>
Water (about 125° F.) (52° C.) . . .	80 ounces	2.5 liter
Sodium Thiosulphate (Hypo) . . .	2 pounds	960.0 grams
Sodium Sulphite (desiccated) . . .	2 ounces	60.0 grams
*Acetic Acid (28% pure) . . .	6 ounces	190.0 c.c.
**Boric Acid, Crystals . . .	1 ounce	30.0 grams
Potassium Alum . . .	2 ounces	60.0 grams
Cold water to make . . .	1 gallon	4.0 liter

*To make 28% acetic acid from glacial acetic acid dilute three parts of glacial acetic acid with eight parts of water.
**Crystalline boric acid should be used as specified. Powdered boric acid dissolves only with great difficulty and its use should be avoided.
1 gallon will fix approximately 7,000 to 8,000 square inches of film. Fixing time 15-20 minutes. When the time required for clearing exceeds ten minutes (total fixing time of 20 minutes) the bath should be discarded.

Camera Clubs And
Color Photography

Jack Wright

IT IS the aim of this article to tell, briefly, what one camera club has done to cope with the problem created by color photography and the making of color transparencies.

A revolution is taking place in amateur photography which will have its effect for decades to come. No camera club and few amateur photographers can escape it. A man who conducts one of the important departments in one of the oldest camera magazines recently wrote:

"Try color film. It's a revelation to the worker who has conditioned

himself to seeing the world in terms of black and white. But I feel constrained to warn you, it may spoil your taste for anything but color. I have acquired a projector and a supply of Kodachrome and, except for professional orders requiring black and white, all my future shots are to be in color."

Most amateurs will not go over thus wholly and completely, but few will be able to escape feeling some effects of the coming of color.

I think the experience of the San Jose Camera Club has probably been typical. Like most such organizations, the San Jose club has for years held monthly contests to provide prints for various exhibitions, for submission to the magazines and, in general, to give point to the club's activities.

With the advent of Kodachrome and Dufaycolor, the number of entries in the monthly black and white print competitions began to fall off—gradually but most markedly. The competitions were divided between beginners and advanced workers and sometimes there were not enough prints submitted to cover the awards in the two classifications.

Investigation on the part of the print contest director revealed that many of the members were making color transparencies and projecting them for their friends, instead of producing black and white prints on 16 by 20 inch mounts for the club's competitions.

"The color looks so good that black and white seems flat," explained one member.

It seemed that one of two things had to be done—either have the monthly competitions go by the boards or give some sort of recognition to color photography. The latter plan was adopted and the result has been not only a series of most satisfactory contests for colored transparencies but a greatly increased interest in the monthly black and white competitions.

It was decided to enlarge the monthly competitions to include black and white prints, color transparencies and amateur movies. A system of points was set up for winners in each of these media and at the end of the year awards will be made on a basis of combined points. The standing of all members is posted from week to week on a large chart in the club rooms.

Winners of first place in the monthly contest for black and white prints are credited with ten points. Second place brings six points, third four points and three honorable mentions win two points each.

In the monthly contests for colored slides each member may submit a batch of not more than ten. In the San Jose club these are judged as a unit and not on the basis of any single slide. It would be possible, of course, to make the awards for the best slide, but the other method seems simpler.

The winning batch of slides is given six points. Second secures four points, third two points and honorable mentions one each. The difference in the scale of awards is to compensate for the fact that it is more trouble to make up black and white prints than Kodachrome slides.

In the contests for amateur movie makers the awards are similar to those for slides. Decisions in all contests are made by vote of all members present.

The club meets every two weeks and the contests for black and white prints and for color transparencies are held at alternate meetings, to afford variety and to avoid making any session too long. Oddly enough the

recognition of the taking of color transparencies has greatly stimulated the making of black and white prints, the members going to work in both media with increased interest, in the hope of winning awards at the end of the year.

Incidentally, the educational value of looking at large numbers of color transparencies is great. In the beginning most of the popularity went to the loud and gaudy colors which demonstrated most strikingly the wonders of the new discovery. Now the collective taste has improved to such a point that quieter and far lovelier use of color is demanded. The value of this training is inescapable and it is the plan of the San Jose Camera Club to propose a system of exchange between clubs of batches of transparencies for exhibition, in the same way that black and white prints are now exchanged.

It would take a brave man to predict the final outcome of the advent of color into photography. Those who are most quick to seize the new have been predicting that color photography will completely replace black and white and that, once a simple method of making color prints on paper is developed, pictures in monotone will disappear.

Others, more conservative, who have been successful and happy working with black and white, view the advent of color with misgivings, if not alarm.

In the long run a balance will probably be struck in which color will be used where it is most suitable and black and white where it seems to be indicated. The etching and pen and ink drawing have never given way to the flamboyant color of painting, and it is doubtful if color photography will ever wholly replace the quiet beauty of monotone.

Be that as it may, progressive camera clubs will give official recognition to the advent of color and will find a renewed interest on the part of their members as a result.

Automatic Diaphragm Control For Graflex

Otto Rothschild

THE Folmer Graflex is one of the finest cameras made. It has proved itself invaluable in many cases. But no camera is perfect, and I have found that the inability to focus it quickly under certain conditions can be a serious handicap.



Figure 1

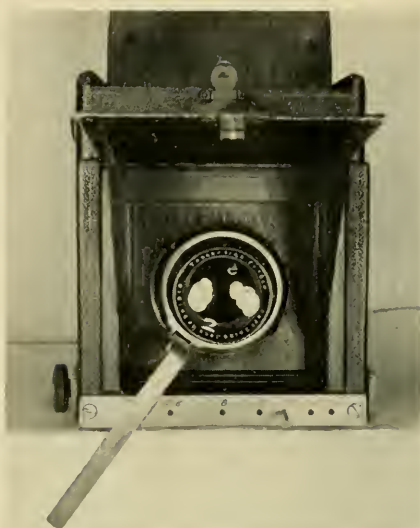


Figure 3

This drawback can prove inconvenient, especially in dim light. When using it, you must either focus the camera while the diaphragm is stopped down to the aperture you plan to use, or focus wide open, and then stop down. The former way is very often unsatisfactory, for, unless you are out in bright sunlight, it is hard to define the image on the ground glass at small apertures. The latter way, to focus and then stop down, is awkward, because after focusing, you must turn the camera around in order to see the diaphragm markings on the lens. By this time, the picture may be gone.

This is especially true of the Series D Graflex, where the lens is sunk beneath a hood.

This device eliminates such inconvenience, as you can pre-set the aperture, focus wide open, and stop the lens down the instant before you shoot the picture. It is especially valuable when photographing under adverse lighting conditions, or when using a photoflash lamp, such as the Mendelsohn or Hastings.

As a rule, a flashgun is used on a Graflex, because the lighting conditions are poor, and the intense light coming from the flash bulb makes it necessary to use a small aperture. Focusing through this small aperture in dim light would be highly impractical, if not impossible. With this device, it becomes a simple matter. You use the widest possible aperture to focus the camera, and with a quick turn of the hand, set the diaphragm and shoot.

Figure 1 shows the device in use with a Hastings flashgun.

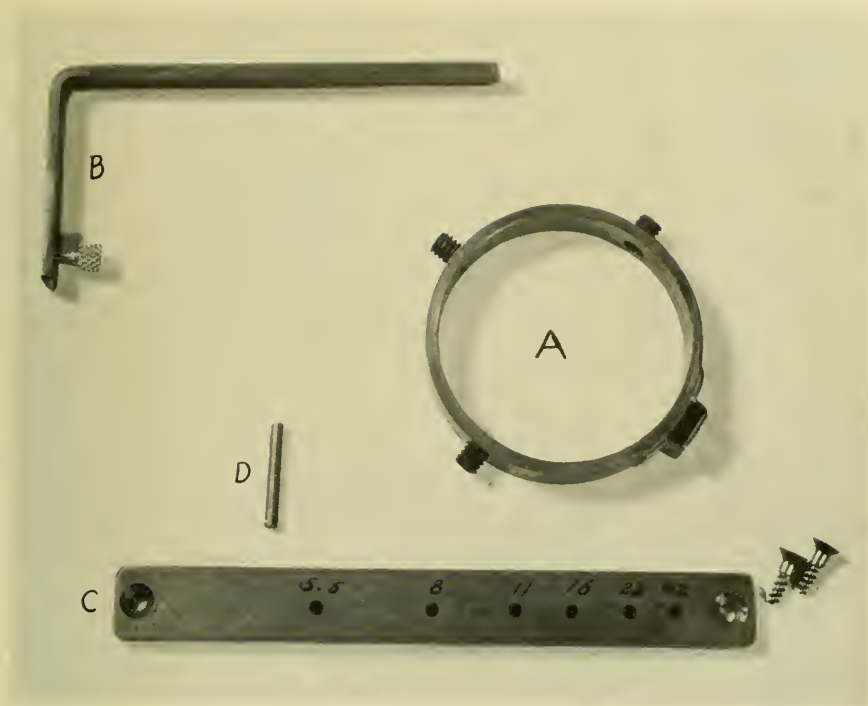


Figure 2

Figure 2 shows all the parts necessary. Ring (a) is cut from a brass tube slightly larger in diameter than the diaphragm control flange around which it is to fit. It is fastened on with the three set screws shown. The rectangular socket is bent from a small piece of sheet brass and soldered to the ring. The lever (b) fastens into the socket with a knurled set screw. It is made from a brass bar $1/16 \times 3/8 \times 6''$. Plate (c) is a piece of $1/8$ inch brass, but to fit the front of the camera, and is fastened to the camera with the two screws on the right.

To determine where to drill the holes in the plate, the whole device is installed onto the camera, and the lever is moved across in the normal manner. The position of the lever against the plate is marked at each stop. The plate is removed, and $1/16$ inch holes are drilled to fit the brass pin (d). Each hole represents one stop.

By presetting the pin in the desired stop, you can focus with the lens wide open, and, when ready to shoot, move the lever over until it is stopped by the pin. The diaphragm will automatically be at the desired opening.

Figure 3 shows a closeup of the device assembled on the camera.

Cinema Section

Edited by

William A. Palmer

Why Not Ride Your Hobby to Work?

H. B. Butler

TWENTY years ago, perhaps it was, that the cornerstone to the new company building was laid. The Old Man was there—a young man, then, and very much in the background. In the front rank, with the Board of Directors all in tightish trousers, was the Big Boss, who died ten years ago.

No doubt somebody for whom the occasion was of great importance said, "I'll remember this to my dying day." But does he remember it as it was? Does anybody? Does the stiff, faded photograph show how those gentlemen moved, and laughed, and bowed to each other? How the building looked at different stages of completion? How the Big Boss stuck out his chin before he cleared his throat?

Perhaps to you there is no sentiment, no seed for memories, in laying cornerstones. But somewhere in your company, your business or in the work you are doing, lie episodes which you and those who work with you would like to keep, as people nowadays keep pictorial records of their children, trips, sports, and friends. If that imaginary scene of twenty years ago were enacted today, it would be caught by a movie camera. Probably the camera of an amateur. An amateur, who instead of seeking the color and interest of Zamboanga and Zululand, had found color and human pictorial interest within the boundaries of his own activities.

This amateur without doubt would be one of the few who had overcome the two greatest handicaps to the making of amateur movies. The handicap of what to take. The handicap of how to pay for it.



*Ride your hobby horse
to work.*



*Make your audience
howl for more.*

"What to take" he solved by keeping his eyes open to the activities of the business he was engaged in. And since about a third of his time was spent in business, he found plenty of subject matter for his camera.

"How to pay for it?" The camera subjects themselves paid for his hobby ride, just as his friends had supplied film when they wanted pictures of their children taken for their personal use.

Activities of businesses, whether of the type that lay cornerstones or eggs, can be divided roughly—and for photographic purposes—into three groups. First, employees. New employees—the executives, minor officials, salesmen, clerks. Old employees—"Pop", who'd been sitting by the door as long as anyone could remember, writing it down in a book if you were five minutes late. The vice-president in charge of sales, who always left at noon on Wednesdays, dressed in his golf knickers. Regular employees—at work, at play individually. Their manners and mannerisms.

Then the second group, that of employee activities. The company golf and tennis tournaments. Handball and basketball matches. The annual baseball game, and the picnics, dances, boat rides and so on, that the employees as a group organized.

Third, the special company occasions. Dinners, the president retiring, and the openings of new buildings, new offices, or new quarters. All grist for the camera.

And how to pay for the fun of photographing all this? Elementary—or almost elementary. A simple problem of the proper approach to the proper people at the proper times, plus coming through with a final document so human, so interesting, and so well photographed and edited that your audience howls for more.

The first step is to get clearance from the necessary officials—from the activities committee for an employees' shindig, from the company officers for a company occasion. Or, in a smaller business, one man's sanction may be enough for all occasions. The understanding should be that the organization supplies the film, you take the pictures, and—when the film is edited, you'll show it to the interested groups. After that it becomes company property.

This clearance safeguards you from being stuck for the price of the film

used, and from playing Santa Claus for everybody's good time. It gives you an official photographer's prestige, with all the press rights of going where and when you want to for the sake of better pictures, and of asking your actors to step right or left, or to "Hold it" for a focus. It paves the way for you to be the one to take the next set of pictures, and, incidentally, will get you a surprising number of friends and acquaintances if you don't misuse the limelight.

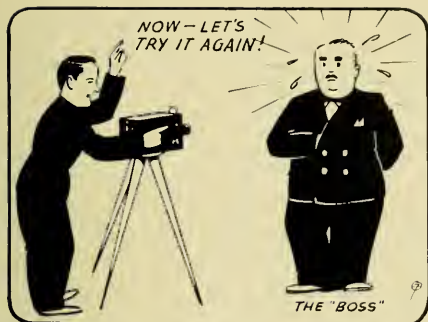
In making your audience cry for more, remember that movies made at even a nominal expense to others have to be good. Because you know them, you will, of course, have the tolerance of your audience as one of your assets. But throw in a typical tourist-with-his-first-camera pan—the kind that begins in the middle of the Panama Canal and lasts till Morro Castle, and see whether it's yawns or boos your opus rates. No matter how interesting the scene would be if it were good, if it's bad leave it out. Neither will Mr. or Miss Smith appreciate seeing their faces swollen into fuzzy close-ups. Better a clear long shot, recognizable if possible, than that.

Give time and thought to your shooting plan. If you're getting your workout on that most difficult assignment, which is simply shooting pictures of employees, you have a chance to be your most brilliant self, or your dullest self. Whichever you choose to be, your product must show everybody's picture—some in groups, some singly, and a few of those best known in clear close-ups. If you have *carte blanche* you can make it the easiest way. Simply a series of personality portraits in motion. Something like those books that are published periodically in small towns, in which the butcher, the baker and candlestick-maker have their portraits and biographies printed for the price of a fat subsidy to the promoter. Or you can remember what Otto Soglow does in cartooning *The Little King*—what Percy Crosby does for *Skippy*. Perhaps you'll recall that amateur prize-winning movie of a few years ago in which the action was made plain without the actors being shown. Slippers and shoes together—a forgotten cigarette—a top hat and gloves laid on the table. In these examples, and in dozens more, lies a single unusual twist or angle that makes them top flight. Don't plagiarize, but do get your suggestions from all sources.

For example, in shooting the employees, why not have a new girl—the newest if she photographs well—simply finding her way around. A clear full length view of her passing "Pop" at the front door, and smiling her "Good Morning" at him. And from there on, let her be present most of the time, but instead of featuring her, let her be only a unifying force—a sort of hanger to put the rest of the picture on. In a shot of one of the old employees at a desk, perhaps let the girl's hand and part of her skirt show at the side of the picture. A short shot of her feet going upstairs. And if any man in the company is known to have the largest feet, and glories in his possessions, it's a swell place to get him in, coming from the opposite direction. The rest is yours to figure out.

Another variation on the employees theme is obviously to catch them at their hobbies. Here again try for an unusual twist. And by "unusual", the word "ridiculous" is not implied. Simply add the angle of your own style to what you are taking, and do it so your audience will like it. Yours is the plan for the picture. You are doing the shooting and editing according to that plan. So why not give your audience a little more than its money's worth?

If you have no choice, and have to turn your film child into one of those brief biographies affairs, make it as painless and as adequate as possible. See that you



*An official photographer's
prestige.*



*Don't be too candid
about the boss.*

get each person in a characteristic pose or setting. Make your titles brief and to the point, and your photography technically above reproach. Give your sponsors what they want, and give your audience as much of a break as possible.

If you can crack that personalities assignment creditably, you'll be able to work wonders with the organized employee activities. In photographing a winter sports trip, for example, a series of short establishing shots may make an excellent introduction, not necessarily breath-taking views of mountain, snow field and frozen lake. You can do it if you want to, with small things, and still leave your customers satisfied. Snow, banked on each side of the railroad tracks—skis and ski poles standing upright in a drift—a bonfire, if there was one. Probably you'll try a panorama, but be prepared to leave it on the cutting room floor if it doesn't pan out.

Don't go berserk on art. It's the human interest that is your photographic purpose. Keep your comedy shots free from sting. Too big a belly laugh generally is at someone else's expense. And keep your continuity simple. The text of that current classic "Ferdinand" is the essence of simplicity. But what a punch the pictures give it.

Save your yearnings toward trick shots and slapstick till the time you photograph the golf tournament. Then turn 'em all loose. You can have the ball going in circles, or by reverse action make it bounce against the base of a tree, climb the trunk, and nestle on a branch. You can show almost anyone sweating and flailing his way out of a sand trap. Or if you can find a willing victim, let him make a series of dubbed shots on the brink of a water hazard—almost, but never quite toppling in. Frequently your audience will laugh more at what almost happens than at what does happen. You keep them on edge—waiting for the tumble—and no fall you photographed could be as funny as the one they're expecting, and supplying each time in the mind's eye. W. C. Fields used this principle when he had a pewter cue made for his famous billiard sequence. He said the audience always laughed harder when the cue bent than when it broke.

Let your fun be from the golfer's point of view. If you play the game yourself, you know the attitude. If you don't play, eavesdrop for ten minutes at the Nineteenth Hole, and find out what they're kidding each other about. In this type of movie, you can turn your mistakes to your own advantage. One amateur golf photographer, who wanted to show the passage of time, stationed a work-

man in a clock tower to push the hands around the dial. When the film was processed, two large feet showed beneath the clock face. This shot, dubiously included, turned out to be one of the hits of the picture.

Here again, however, your primary job is to get at least one shot of every player. One amateur photographer carries a check list with him so as to make sure not to miss anybody. He found out once what a heinous offence it was to omit the office boy. Try for close-ups as much as you can. They are the making of these pictures. Not only show faces, but hands, feet, backs—for a golfer, his stance. Branching into the other sports, why not the face of a tennis or basketball player as the ball leaves him? The swing of a bowler? Expressive legs under a bridge table? Plan the shooting before you start, and be sure to get all the material you need.

Company functions call for straight newsreel technique, with straight news titles. No comedy here. Photograph in the spirit of the function itself—seriously. Catch the memorable facial expressions, the handshakes. If the president is retiring and one and all are gathered for the eulogies, try to get the characteristic mannerisms that everyone is familiar with. Take the cup or other mementos given him. And don't forget his wife and family if they're known to any of the group. Sadly enough for your efforts, the film may have a different effect on an audience ten years from now, but you can't help that. If you have seen the recent revivals of screen classics you've noticed that the most serious moments have been tempered by time to be the funniest. Who loves the Sheik now?

Allow for more film being used than you generally shoot for your personal record. You'll need the margin for selecting your scenes. And when it comes to editing—Edit drastically, keeping in mind the fact that people would rather see five minutes of good pictures than thirty minutes of hodge podge.

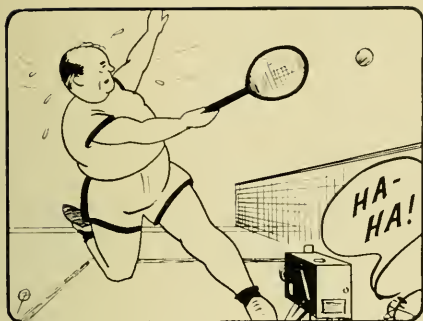
A "must" for each film is a title telling who, what, when, where. This is essential to the film's value as a record, and is your insurance against the information being lost in some future shuffle. If you've decided (regretfully) to dispense with printed titles, the information may be written out in long hand, filmed, and placed either at the head or tail of the movie—for information, not for projection.

Include this, and printed titles if you intend to use them, in your cost estimate. The state of the exchequer and the needs of the film will determine the number you'll use. Do you remember the old custard pie silents, with an explanatory wisecrack flashed on the screen every other minute? That's a tempting field, and like most temptations, expensive. It's better in the long run to be straightforward. Your audience will laugh at the movie itself long after the humor of your best joke is worn threadbare.

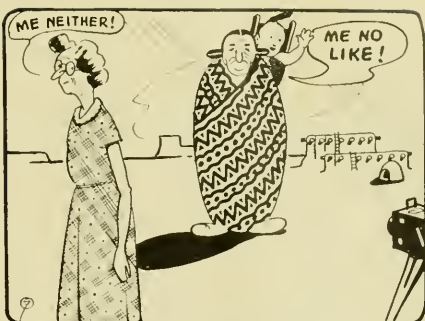
Perhaps you are equipped to make your own titles. In this case, the only expense would be that of the film. If you are not prepared to make them yourself, buy them from a movie store.

In general, keep your camera human. Don't be too candid about the boss, but don't play up to him, either.

Try to avoid antagonisms and hurt feelings. If you're going to poke fun, poke it at someone who takes it well, and poke the kind of fun he pokes at himself. Photograph only those who want to appear in the movie. Just about the only two classes left who genuinely resent the camera are Indian squaws and women who say they've never had a decent picture taken yet. The squaws regard the lens as the evil eye. So do the women.



*Don't poke fun
if it will hurt.*



The evil eye.

If, in the midst of these "do's", "don't" and "musts", you feel that riding your hobby to work might be riding toward a fall, remember that the whole thing resolves itself into trying to please the other fellow. You try for that every time you buy a Christmas gift. Because you are an amateur, making specified movies for a special audience, you have the advantage of being able to check what goes over, and what doesn't. Notice the points that don't click and leave them out of the next film.

Your personal problem is to keep your amateur standing. Don't donate, but don't "make" money. Your time is your contribution, but what's time to a hobby rider? If it's to be a fully paid job, leave the grief and the gains to professionals.

After the film has been taken, edited, and shown, it should have a permanent storage place in the library, the company vault, or in some executive's office—a record for yourself and your associates of how the future "Old Man" behaved when he was young, of "Do you remember when?", of "How funny we all looked in those days."

Questions and Answers

Question: How can I get accurately centered titles?

Answer: This is the question most frequently asked on the subject of title making. None of the commercially built titlers can be trusted to hold the camera so that it centers *exactly* on the title card holder and so it is best to determine the exact field and position by an actual test. We have always recommended that a piece of graph paper with numbered lines be placed in the titler and photographed. (The camera, of course, should be fastened to the titler in a secure position which can be re-established at other times.) From an inspection of the film taken of the graph paper, the exact field and position can be determined once and for all.

Question: Is there much difference in quality between an f:3.5 and an f:1.5 lens?

Answer: A popular misconception is that an f:1.5 lens, because it is more expensive, will give a superior image under all conditions than will an f:3.5 or other "slower" lens. Actually, with lenses of reliable manufacture, the f:3.5 lens used at the same stops as an f:1.5 lens will give exactly comparable definition. The only practical advantage of the speed lens is to enable the camera to be used under more adverse light conditions. It has been sometime held that the more expensive "speed" lenses do not give as good definition when used at small apertures, but this is purely a theoretical criticism and under practical conditions a good "speed" lens is satisfactory at all apertures.

Question: When a room is too short for the projector to fill the screen with the regular lens, should a shorter focal length lens be used?

Answer: If the members of the audience cannot be placed further from the screen than the projector itself, a wide angle ($\frac{3}{4}$ inch or 1 inch focal length) should never be used. In general the regular lenses will give the right size picture for a viewing position near the projector. If a room is short, then a smaller size picture is desirable.

Question: In lighting interiors, can the photoflood units be placed closer to the subject than the camera?

Answer: Yes. The most important thing is that the lighting units do not appear in the camera field. Remember that when shooting interiors, your exposure is determined by the distance between the lights and the *subject* and the position of the camera can be ahead or behind the lights.

Question: What projection lamp and lens equipment is recommended for home projection?

Answer: For the normal size of rooms in homes a 400 watt light and *smaller* diameter (f:2) projection lens is the best combination. A 48 inch picture is as large as most homes should have and a 750 watt light with an f:1.6 lens is too much.

Question: What causes scenes to go in and out of focus during projection?

Answer: The most common case in which the lens must be re-adjusted during projection is when original and duplicate films are spliced together on the same reels. The emulsion of a duplicate (or a print from a 16mm negative) is on the reverse side of the film than that of an original. The result is that the projection lens must be turned in or out the distance of the film's thickness to re-establish focus. There are cases, too, when different scenes will require a change in the lens adjustment, even if the emulsion direction is the same. Different types of film such as Kodachrome and regular reversal will often have a different curl and will not both occupy the same plane in the projector gate. This in and out of focus is much more apparent with a projector equipped with a large aperture lens used at a short distance and is the main reason why a smaller aperture lens is preferable except when very large pictures must be shown.

What Is Your Photographic I. Q.?

Once more the popular "four answer" type of quiz is presented to you. Check the correct answer or answers as the case may be.

All correct, scores 100%. For each error deduct 10%. Excellent rates 90%; very good, 80%; fair, 70%; below 70%, not so good!

1. Four measures used in the avoirdupois system are fluid dram, quart, pound, and grain. Their respective abbreviations are correctly shown below with the exception of one error which is to be checked:

Answers on page 52.

- ☐ fl. dr.
- ☐ qt.
- ☐ pd.
- ☐ grn.

2. Two new fine grain developers have recently been announced. Check them below.

- ☐ Eastman DK-20
- ☐ Edwal 20
- ☐ Champlin 16
- ☐ G D X

3. In making a copy of a blue print, which one of the following filters should be used:

- ☐ Light Blue
- ☐ Deep Green
- ☐ Strong Red
- ☐ Blue-Green

4. Three of the books listed below were written by William Mortensen, the fourth by Hillary G. Bailey. Check the title of Mr. Bailey's book.

- ☐ Print Finishing
- ☐ The Story Of A Face
- ☐ The Command To Look
- ☐ Pictorial Lighting

5. A 28% acetic acid is frequently used in photography. It is made by diluting three

parts of glacial acid with water of the following parts:

- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8

6. If you had four negatives which had been developed to the gamma values listed below, which one would be most contrasty?

- ☐ 0.5
- ☐ 0.8
- ☐ 0.9
- ☐ 1.2

7. The four clubs which won the Camera Craft Club Trophy Cups for 1938 are listed below. Check the names of those clubs which have won cups in the past.

- ☐ Fotoklub Zagreb
- ☐ The Pack Rats
- ☐ Sierra Camera Club
- ☐ Calgary Photographic Society

8. When a camera is focused, for example, upon an object ten feet from the camera the depth of field in front of the object in comparison to the depth in back of the object will be:

- ☐ The same
- ☐ Less
- ☐ Greater
- ☐ None

9. Reticulation is a condition that at times is found in connection with:

- ☐ Developers
- ☐ Hypo baths
- ☐ Films
- ☐ Filters

10. Which of the following processes is considered the first paper negative process?

- ☐ Daguerreotype
- ☐ Calotype
- ☐ Heliography
- ☐ Ambrotypes



"Nautilus"

Frederick G. Lacey, Indianapolis, Ind.

First Award Advanced Class

■ This picture comes just about as close to abstract design as is possible in photography. It is well to appreciate that it is not the degree of abstraction that is important. It is the quality of the design that counts above all other things, in such a picture. Notice that this picture catches the interest before the observer has had time to realize the nature of the subject matter, abstract or otherwise. All photographs which have a well organized pattern of black and white will do that. Mr. Mortensen has very aptly called this quality "the command to look." We notice it more in prints such as this where subject matter is subordinated, but it is well for the student to appreciate that it is an important quality in all pictures. Mr. Lacey has handled his subject with great skill. Notice how the gradation of tone values in the flat masses of the ceilings move from dark to light, echoing the spiral movement of line. Good judgment is also shown in trimming into the outer edges of the spiral at either side. If the spiral were completely surrounded by dark tone on all sides, the observer would not get the feeling of free movement which is now such an attractive part of the picture.

Data: 5 x 7" View; 6" Zeiss lens; E. K. Panchro Press film; 11 x 14" print on E. K. Opal W.

Second Award

Advanced Class

■ It is hard to imagine anything which "plays with light" more beautifully than does a large expanse of sail. Mr. Hugelmeyer has taken full advantage of that quality and has then repeated his main theme with two almost identical minor notes. We are sure all will agree that the trio creates a lovely harmony. Notice how effectively the pathway of light on the water, set up by reflection from the largest boat, invites the eye into the picture. The four masted schooner which is barely visible at the right edge of the print is not properly a part of the picture. However, it has been so effectively subdued that it no longer constitutes a distraction. The sky tone is just right. It presents the sails in fine relief, but without unnecessarily harsh contrast.

Data: 11 x 14" print.



"A Quiet Run"

John Huglemeyer,
Brooklyn, N. Y.

Third Award

Advanced Class

■ This picture is based entirely upon a pleasing arrangement of architectural forms. As such, the material is well seen. We feel, however, that the picture could be made much stronger if advantage had been taken of the interesting variety of textures which are present. Several wood textures plus stone and concrete afford an abundance of material which would respond to such emphasis. Apparently such treatment is impossible with the present negative. The lighting is too soft for good rendition of textures, and judging from the all over lack of definition in the print we assume that a very great enlargement has taken place. A shot made under stronger lighting and with a longer focal length lens would correct both of these conditions. Every effort should be made to bring the foreground objects into sharp focus. In fact, this is essential, and it would be less detrimental to have the focus fall off slightly in the distance even though the principal objects are located there. Ideally speaking the building behind and to the left of the steeple is not part of this arrangement. It only confuses an otherwise delightfully simple composition. A low viewpoint would eliminate this building but would also bring the foreground material higher up in the picture space. This last condition would destroy the present harmony of forms and consequently no correction seems possible. We hope Mr. Campbell will try this again, keeping textures in mind.

Data: 2½ x 3½" Voigtlander Avus; Skopar lens; 1/25th sec. at F:11; on E. K. S.S. Pan.; 11:45 A.M., no filter; 11 x 14" print on E. K. P.M.C. #11.



"From A Window"

S. N. Campbell,
Indianapolis, Ind.



*"Early Spring" Helen Thompson Farrell,
Brooklyn, N. Y.*

ground material (in this case the plane in the middle distance) is likely to take on something of the quality of the theatrical backdrop. That is to say it will lack the feeling of the third dimension. In this case we think the solution would be to carry sharp focus into the plane in the middle distance and to establish aerial perspective through variation in tone values alone.

Data: 11 x 14" chloride print.



*"Look Out!" Victor Pokorny,
Arnold, Pa.*

Data: Zeiss Super Ikonta B; 8 cm. Zeiss Tessar F:2.8; 1/100th sec. at F:11, on E. K. Verichrome, in D-76; medium yellow filter; 11 x 14" print on Defender Velour Black DL.

Fourth Award

Advanced Class

■ Miss Farrell has done a fine job of organizing these massive forms into a well integrated composition. The figures are placed just right and the whole thing holds together beautifully. All of the accepted axioms for creating aerial perspective have been followed. There is a strong, dark, foreground accent and both tone values and definition diminish with distance. Nevertheless, we still feel that aerial perspective is not as strongly shown as might be. Why this apparent contradiction? Notice that there are two principal planes. The foreground plane, which includes the figures and the nearest arch, and a plane in the middle distance which includes the other bridge and the trees at the left. The foreground plane is sharp, and the plane in the middle distance is definitely out of focus. There is nothing in between. This lack of something "in between" causes a very abrupt transition from the sharpness of the foreground to the marked diffusion of the middle distance. When such a situation occurs the transition is not sufficiently explained and the back-

Fifth Award

Advanced Class

■ To our way of thinking this picture points to one of the most legitimate 'provinces' of the candid camera. Amusing little anecdotes such as this can be obtained in no other way, and they are surely worth having. It may sound like heresy, but we suspect that many a photographer is inclined to take himself a bit too seriously. To feel that each of his pictures must be burdened with a GREAT IDEA, when a modest little thought, an amusing little suggestion would be sufficient. Art does not deal only with the Great, the Solemn, the Profound, or the Magnificent. It deals also with the opposites of these terms. Much of the work of artists in other mediums is concerned with little things which caught the attention of the artist. Photographers who can learn to "see" in this way will find a wealth of material opening up before them. But beware of the personal anecdote which is understandable only to yourself and your friends. Many attempts at photographic humor fail because of this shortcoming.



"Hemlocks"

Marion Partridge

First Award Amateur Class

■ This is a fine example of good straight photography. The tree form is very interestingly seen, and the exciting variation of textures are beautifully rendered. The point of view has been selected with unusual skill. Not only with respect to the tree form itself, but with respect to the background elements as well. Notice the important part played by the dark foliage in the background at either side of the print. This provides variation in the background, a suitable setting, and helps establish the third dimension. Even more important is the fact that it concentrates attention on the tree form by preventing the eye from slipping around either side of the tree trunk and sliding out of the picture. That might easily happen if the tree form were simply isolated against the sky. As things are, however, the composition is beautifully compact and self-contained, with no suggestion of weakness at any point. A fine piece of work.

Data: $7\frac{1}{2} \times 7\frac{3}{4}$ " glossy bromide print.

Second Award

Amateur Class



"Jean Hersholt"

Fred Herrington,

San Francisco, Calif.

Panatomic cut film in DK-76; background is shrubbery in shadow; 11 x 14" print on Gvaert Artona, in D-72.

■ This is an exceptionally fine piece of portraiture. Because all of us are familiar with this face we are able to see clearly how very successful Mr. Herrington has been in capturing the kindly, cultured character of this greatly admired actor. We'll bet that most of our readers marked this down as a studio shot. Actually it was made out-of-doors without even a reflector to help control the light. Mr. Herrington explains that the sun was coming through openings in the trees—hence the apparent concentration of light. He used shrubbery in the shade for a background and the light colored ground reflected enough light to get into the shadows under the eyes, etc. This is a simple enough set-up for anyone and yet look at the results. This picture proves that outdoor light can be controlled and directed if only we know how to do it.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; $6\frac{1}{4}$ " Zeiss Tessar; $1/30$ sec. at F:6.3 in July sunlight;

Third Award

Amateur Class



"Action"

Glen Fishback,

Sacramento, Calif.

notes the action while the other two complete the circle. The picture is made doubly effective by a fine rendition of water and flesh texture.

Data: Leica E; 50mm. Elmar F:3.5; $1/500$ sec. at F:6.3, on E.K. Super X, in Champlin 15; $9\frac{3}{4} \times 13\frac{1}{2}$ " print on E.K. Opal G, in D-72.

■ Action shots with good composition are among the most difficult things to get in photography. For the right composition lasts for only a fraction of a second, and you either get it then or not at all. In addition it is necessary for the photographer to anticipate the movement of his subjects and trip the shutter an instant before they reach the proper position, so that when the shutter actually clicks, a moment later, everything will be as wanted. Mr. Fishback has caught a very successful composition based upon a circular motif. The figure on the right clearly domi-

Fourth Award
Amateur Class

■ Here we find another excellent portrait. The face is splendidly lit, and the head stands out from the background in fine relief. Because the light on the model's right shoulder is rather strong, it seems to come forward a bit more than it should, and in so doing tends to attract a shade more than its proper share of attention. This is a very minor fault, but some dodging in of this area in the lower left would cause the shoulder to recede and reduce the contrast of the pipe against it, resulting in a slight increase of concentration on the head. We wish to make it quite clear that we do not mean to imply that the shoulder is an important distraction. It is not. We do feel that a slightly better all around balance of values will be obtained if this area is slightly lowered in tone.

Data: 9 x 12 cm. Zeiss Ideal B; 15 cm. Zeiss Tessar; 1/100th sec. at F:11, on Agfa Superpan Filmpack, in D-76; bright sunlight 11:00 A.M. in August; no filter; 11 x 14" print on Gevaert Gevaluxe Velour, in Metol-Hydroquinone.



"The Hermit"

Ralph E. Day,
Holyoke, Mass.

Fifth Award
Amateur Class

■ This flower subject is technically just about as perfect as one could wish, and the blossoms themselves are spectacularly beautiful. There are certain conditions which tend to give the arrangement something of a mechanical and static quality which is not pleasing and we will try to point these out. First consider the background of dark foliage. It is almost exactly rectangular in shape and occupies just about half of the picture space. Likewise the two blossoms are equally spaced from all sides of the print, and are placed on the same horizontal plane with respect to each other. Thus we think it will be clear that both the background treatment and the placement of the blossoms suggest to the observer a stiff mathematically laid-out arrangement. By running the background material irregularly throughout the background and by placing the flowers one slightly above the other, with some variation of spacing with respect to the sides of the print we would create a much freer feeling and one which would be more in keeping with the subject matter. It would still be possible to show one blossom against a light and the other against a dark background, which is evidently Mr. Wright's intention, but the treatment would be less obvious and therefore more successful if the above suggestions were carried out.

Data: 10 x 11" bromide print.



"In Full Bloom"

Jack Wright,
San Jose, Calif.

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Victor Pokorny, for the Aluminum Camera Club; Frederick G. Lacey and S. N. Campbell, for the Indianapolis Camera Club, and John Hugelmeyer and Helen Thompson Farrell, for the Pictorial Photographers of America.

The following won prizes for their clubs in the Amateur Class: Fred Herrington, for the E.P.I.C. Pool, and Jack Wright, for the San Jose Camera Club.

The following prize winners have no club affiliations: Ralph E. Day, Glen Fishback and Marion L. Partridge.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Photographic Society of San Francisco
Calgary Photographic Society (Canada)	Photo Section, Pittsburgh Academy of Arts & Science
Cleveland Photographic Society	Pictorial Photographers of America
Florida Camera Club (Tampa, Fla.)	Salt Lake Camera Club (Utah)
Fort Dearborn Camera Club	San Jose Camera Club (Calif.)
Indianapolis Camera Club (Ind.)	Sierra Camera Club (Sacramento, Calif.)

STANDING OF CLUBS

Large Clubs Advanced Class

Indianapolis Camera Club.....	8
Pictorial Photographers of America.....	6

Large Clubs Amateur Class

No Scoring

Small Clubs Advanced Class

Aluminum Camera Club.....	1
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Small Clubs Amateur Class

E.P.I.C. Pool	4
San Jose Camera Club.....	1

Cash Awards in 1939

In response to what appears to be the wishes of the majority, Camera Craft is now offering monthly cash awards for the first and second prizes in each class instead of the medals and merchandise orders heretofore given. The amounts will be \$10.00 and \$7.50 in the Advanced Class. \$7.50 and \$5.00 in the Amateur Class. A year's subscription will be given for the Third, Fourth and Fifth awards in each class. With the above exception the rules and conduct of these competitions remain unchanged. The competitions are fully explained in the following pages.

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Correspondence

Error

Gentlemen:

I find in your December Issue an article by Mr. Nestor Barrett, and note what he has to say about Kodachrome.

... In a further paragraph, he states that if the 1/30 at F5.6 exposure is changed to F:6.3, 1/15 second is required and at F:8, 1/5 second.

It would seem to me that if he considers F:5.6 a proper stop for 1/30 second, then 1/15 would be proper at F:8.

Are these typographical errors, or am I all wrong?

Yours very truly,
CECIL R. BARBEE.

Typographical error. 1/15 at F:8 would be right.—ED.

About Titles

Dear Sirs:

Allow me to point out a mistake in the title of the picture on Page 551 of the latest issue.

The scene is not located at Peggy's Cove, N. S., but a hundred miles or so from Peggy's; to be exact, it is "Blue Rocks," near Lunenburg, N. S.

Probably Mr. C. N. Sanchez got his negatives mixed up. This, of course, in no way detracts from the merits of the picture.

Sincerely,
R. DESME.

Club Notes

A 100 print exhibition of Edward Weston's recent work will be on display at the Katherine Kuh Galleries, 540 N. Michigan Ave., Chicago, Ill., from January 1 to 31. So far as we know this is the first showing of the work which Mr. Weston has been doing under his Guggenheim Fellowship.

Those who are more or less familiar with Mr. Weston's pictures will find much that is excitingly new and different in this exhibition. That is not surprising for Mr. Weston is an artist who is very much alive. He doesn't believe in standing still.

Any Weston exhibit is an event of importance. This one especially so for the work shown may soon be accepted as marking the beginning of a new period in Weston's development. We might suggest that Mr. Weston's article in this issue will help many to look upon the exhibition with more understanding eyes.

Courses in photography, conducted by P. Douglas Anderson, F.R.P.S., will be given by the University of California extension division beginning in January, 1939. Courses and opening dates are as follows:

SCHOOL PHOTOGRAPHY 785AB Thurs., Jan. 19, 4 p. m., 540 Powell St., San

Francisco, and Wed., Jan. 11, 4:10 p. m., 1730 Franklin St., Oakland. Credit: 2 units.

PHOTOGRAPHY: PRINCIPLES AND PRACTICE (ADVANCED) (Projection printing; orthochromatic photography; pictorial composition; negative retouching; home portraiture; field trips). Thurs., Jan. 12, 7 p. m., 540 Powell St., San Francisco and Fri., Jan. 13, 7 p. m., 1730 Franklin St., Oakland.

DARKROOM TECHNIQUE—(A series of practical laboratory demonstrations in developing, printing, and enlarging. Exposure; developing, materials; after treatment of negatives; reduction; intensification; photographic papers; enlargements; diffusing methods; toners, etc.) Tues., Jan. 10, 7 p. m., 540 Powell St., San Francisco, and Wed., Jan. 11, 7 p. m., 1730 Franklin St., Oakland.

MINIATURE CAMERAS (Lenses and accessories; films, exposures and development; filters, portraiture; table-top photography; projection printing; paper negative technique; copying, etc. Field trips.) Mon., Jan. 9, 7 p. m. 540 Powell St., San Francisco.

The first meeting of any extension course is open without charge to those interested.

Instruction in composition for photographers is to be offered, in the Bay Region, by the University of California Extension Division. Classes will be directed by Leola Dixon Devlin, M. A. In outline the course will offer: an introduction to the art of composing; problems in proportion; simplicity, the keynote to striking pictures; balance; rhythm in landscape, still-life and portraits; harmony; emphasis; lighting for form and structure; color in black, white and gray; a field trip, and public exhibit of prints at the end of the course. Enrollment fee is \$6.00 for 10 meetings. Classes will begin in San Francisco January 13th, at 7:30 P. M., 540 Powell St., and in Oakland, January 9th, at 8:00 P. M., 1730 Franklin St. The first meeting of any Extension Division course is open without charge to those interested.

The Annual International Exhibition of the Pictorial Section, of the **Royal Photographic Society** of Great Britain will be presented during December at the American Fine Arts Society, 215 West 57th St., New York City. The Exhibition is presented in America under the auspices of the Oval Table Society, Inc., of New York.

\$50.00 in Merchandise for the best amateur photographs taken by Artificial Illumination has been offered by the Photo-shop Division, of the Radio Electric Service Co., N. W. corner 7th and Arch Sts., Philadelphia, Pa. Closing date is January 7, 1939, and complete details can be had by writing the Photoshop Contest Editor at the above address.

Salon Secretaries attention. Members of the Photographic Society of India are anxious to submit their prints to International Exhibitions and Salons. They ask that twenty blanks be mailed to their club at Mherwan Bldg., Sir Phirozshaw Mehta Road, Fort, Bombay, India.

The San Jose Camera Club, of San Jose, Calif., is now located in splendid new club rooms at 60 North Second St. This enthusiastic and active group are presenting exceptionally interesting programs at their regular meetings. Communications should

be addressed to O. L. Brauer, Secretary, at the above address.

The Dayton Camera & Cine Club, of Dayton, Ohio, are offering their members an unusually valuable series of programs. Through the cooperation of various dancing and theatrical groups, who have been acting as models, the club has offered demonstrations at which the members take pictures. At the October meeting Mr. Axel Bahnsen, internationally known salon exhibitor, criticized prints for the members.

The Japanese Camera Pictorialists of California recently concluded a very successful Twelfth Annual Salon of Photography. Attractive cups were awarded to the winning prints. Communications should be addressed to the club, at 245½ East First St., Los Angeles, Calif.

The Photographic Group of Philadelphia extends an invitation to all non-members to hear Mr. Milton Goldensky on January 3, 1939. Mr. Goldensky will talk on portrait lighting for both color and black-and-white photography. The club is now making plans for their annual Hobby Show. The show is scheduled to run from February 22 to 28, 1939.

The Exeter Photographic Society was recently organized in Exeter, Calif. Mr. Fred Hauenstein was elected President of the new group and Mr. Giroux Sellars was chosen Secretary and Treasurer. The Society will meet twice monthly.

Classes in Photographic Journalism, Commercial and Illustrative Photography in San Francisco. These classes, sponsored by the WPA Education Program, are being held nightly, Monday through Wednesday, from 7:30 to 10:00 P. M., at 647 Minna St. Classes with actual laboratory work are given once each week. No charge is made for this instruction. For further details call at the studio or phone DOuglas 7119.

The Camera Guild of San Francisco, a small group of serious workers, will present an Exhibition of prints, at the studio of Karl Erhard Siegel, 1161 Market St. The Exhibition will be open to the public during the entire month of January, daily 12:00 to 2:00 P. M., and evening 5:00 to 8 P. M., Sundays excepted.

Notes and Comments

New Fine Grain Developing Formula DK-20

Below we give the formula and developing times for the new fine grain developer recently announced by the Eastman Kodak Company and designated as Formula DK-20. Tests show that the graininess obtained with this formula is practically identical with that obtained in such developers as Champlin 15 or a straight paraphenylenediamine-sodium sulphite formula. With most films the graininess expressed numerically is almost exactly half of that obtained by development in Eastman D-76. In other words the grain is very fine. For all practical purposes the emulsion speed of this developer is the same as for D-76. In other words use the emulsion speed ratings given by the manufacturer of your exposure meter. Actually, according to Eastman's report, there is about a 35% loss of emulsion speed, but as most photographers will realize this is negligible in actual work with the camera, being well within the tolerance of the film and well within the probable error in calculating the exposure.

Developing times should be increased 10% for each roll of 35 mm. film (or equivalent) developed when no replenisher solution is used. Keeping qualities are excellent, about the same as D-76.

Kodak Fine-Grain Developer (Formula DK-20)

For use with roll films, film packs, cut films, and plates:

	Avoirdupois	Metric
Water (about 125°F.) (52°C.)	96 ounces	750.0 cc.
Elon	290 grains	5.0 grams
Sodium sulfite, desiccated	13¼ ounces	100.0 grams
Kodalk	116 grains	2.0 grams
Potassium sulfocyanate (thiocyanate)	58 grains	1.0 gram
Potassium bromide	29 grains	0.5 gram
Cold water to make	1 gallon	1.0 liter

Average time of development for all Kodak Roll Films, Bantam Films, and Kodak 35mm. films (except Super XX Panchromatic, Bantam, and Super XX Panchromatic 35mm. films) is about 18 minutes at 65°F. or 14 minutes at 70°F. in a tank of fresh developer. For maximum emulsion speed, develop Super XX Panchromatic

Bantam Film and Super XX Panchromatic 35mm. Film about 28 minutes at 65°F. or 21 minutes at 70°F. in a tank of fresh developer.

Develop Verichrome Film Pack about 20 per cent longer time than Verichrome Roll Film; develop other Kodak Film Packs for the same time as the corresponding Kodak Roll Films.

For tray use, decrease the tank development time about 20 per cent.

Increase or decrease all times for greater or less contrast.

Replenisher Solution

(Formula DK-20R)

For Use with Formula DK-20

	Avoirdupois	Metric
Water (about 125°F.) (52°C.)	96 ounces	750.0 cc.
Elon	1 ounce	7.5 grams
Sodium sulfite, desiccated	13¼ ounces	100.0 grams
Kodalk	2 oz. 290 grains	20.0 grams
Potassium sulfocyanate (thiocyanate)	290 grains	5.0 grams
Potassium bromide	58 grains	1.0 gram
Cold water to make	1 gallon	1.0 liter

Dissolve chemicals in the order given.

Add to the tank as necessary to maintain the volume constant.

Use in a Deep Tank. A given highlight density will be maintained throughout the developer life for a constant development time at a constant temperature provided the volume of replenisher added is about 6 gallons per 1000 rolls of film (80,000 square inches) processed.

1939 Kodak Exhibit Will Visit Eighteen Cities on a Five-Month Tour

Though the show will feature an outstanding group of 200 salon prints and more than 100 color transparencies, as well as Wash-Off Relief Prints from Kodachrome transparencies, of great interest to photographers will be the educational aspects of the show. Demonstrations utilizing illuminated negatives will show how contrast varies with different development times, and how density is affected by increased or diminished exposure. Displays will also illustrate the exposure latitude, fine grain and speed of the new Kodak films. An Eastman sound-film will be shown that presents a survey of photogra-

phy today showing its many ramifications and multitudinous uses. There will be an exhibition of high-speed prints, including pictures made at 1/100,000 second. A local exhibit will also be arranged in each city through camera clubs and photo supply dealers. First showings of the 1939 Kodak Exhibit will be: Boston, Jan. 11-14; Philadelphia, Jan. 18-22, and Washington, Jan. 25-29. Other showings will be announced later.

E. Leitz, Inc., 730 Fifth Ave., New York City, have devised a plan to aid travelers in getting Leicas purchased in this country re-admitted through the customs. This service consists of issuing an "Import Certificate" with each new Leica camera, lens or Leitz Binocular which has been imported through the regular channels by E. Leitz, Inc. For further details, write the above address.

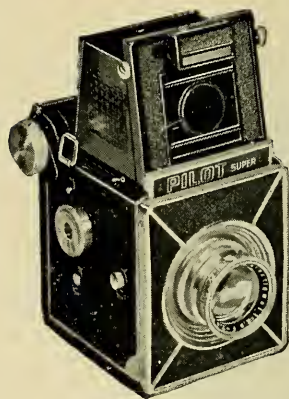
New Dollina and Pilot Cameras announced by Burleigh Brooks, Inc., 127 W. 42nd St., New York City.

The New Super Dollina is the latest streamlined addition to the already popular line of De Luxe Dollina miniatures (all



Super Dollina

using 35mm. film). It is remarkably light and compact and yet is a truly precision instrument. The Super Dollina comes equipped with a variety of ultra-fast lenses and shutter speeds up to 1/500th second, at prices ranging from \$82.50 to \$100.00. The camera has a built-in view finder and an automatic locking device that prevents double exposures.



New Pilot Super

The New Pilot Super Camera offers remarkable features for a camera in its price range. It is a practical reflex camera offering groundglass focusing. It has a built-in exposure meter of the visual type, a removable lens, eye-level view finder and a metal focal plane shutter with speeds up to 1/200th second. The camera also offers a choice of two picture sizes: 12 pictures $2\frac{1}{4} \times 2\frac{1}{4}$ inches or 16 pictures $1\frac{1}{2} \times 2\frac{1}{4}$ inches, on 120 rollfilm. The Pilot Super has a special locking device that prevents double exposures. It is offered with a variety of lens equipment at prices ranging from \$25.00 to \$40.00. Write Burleigh Brooks, Inc., at the above address for further details.

The Higgins Photo Sketch Outfit has been developed by Chas. M. Higgins & Co., Inc., and is distributed by A. I. Friedman Co., 43 W. 47th St., New York, N. Y. The Photo Sketch Outfit permits anyone who can write to make pen and ink drawings from photographs. The process is very simple. With a pen and Higgins Waterproof Ink the photograph is outlined and the shadows filled in, then, with a simple solution of chemicals, supplied in the outfit, the photograph is bleached out, leaving the drawing. The process has many practical applications, as well as that of amusement. For further details write the above address.

San Francisco photographers "shoot" Treasure Island from the air. On several Sundays recently, camera fans of the Bay Area got on board a 21-passenger United

Ail Lines Mainliner and spent an hour taking pictures of the World's Fair site from the air, as well as other beauties of the Bay. United Air Lines offered prizes for the best photographs and received many prints for the competition. The company reports the interest in photography extends to its personnel. Many of their pilots have made aerial photographs which have appeared in leading publications and exhibitions throughout the country.

The Craig Projecto-Editor permits the cinefan to edit his home movies while viewing them on a screen $2\frac{1}{4} \times 3\frac{1}{4}$ inches. The film may be moved back and forth through the Projecto-Editor at will and at any speed, while the image shows brilliantly on the screen at all times. This is made possible by the fact that the device has no shutter and no intermittent movement. For convenience in editing and splicing, the Craig Projecto-Editor is assembled on a 26-inch board with the Craig 16mm. Senior Splicer and Rewind Combination for a price of \$49.50 complete. For further details write the Craig Movie Supply Co., 1053 So. Olive St., Los Angeles, Calif., or 149 New Montgomery St., San Francisco.

New Zeiss Ikon Cameras Announced

Carl Zeiss, Inc., 485 Fifth Ave., New York City, present two new models of their famous cameras.

The Ikoflex III. is an advanced model of the twin-lens reflex type of camera. It has a groundglass upon which the picture is composed and focused and also a hood magnifying lens for critical focusing. Equipped with a Zeiss Tessar F3.5 lens, in Compur-Rapid shutter with speeds from 1 to 1/500th second, and bulb, the Ikoflex III. takes 12 pictures $2\frac{1}{4} \times 2\frac{1}{4}$ inches on a standard 8 exposure rollfilm. The Ikoflex III. has many valuable improvements, among them an automatic lock on the shutter and film transport that prevents double exposure.

The Ikonta B is a moderately priced rollfilm camera that makes 12 negatives $2\frac{1}{4} \times 2\frac{1}{4}$ inches on 120 or B2 rollfilm. It should not be confused with the Super Ikonta B. Three choices in lens equipment are offered, with a wide range of selection. The camera has an eye-level

optical finder and an automatic locking device to prevent double exposure. For further details on either of these new cameras write Carl Zeiss, Inc., at the above address.

Full-Color duplicates can now be made from 16mm. Kodachrome movie films, the Eastman Kodak Co., of Rochester, N. Y., have just announced. Moderately priced, the duplicates will cost only a fraction more than an equivalent length of unexposed 16mm. Kodachrome film. The quality compares favorably with the original. All editing of the film can be done before it is sent in for duplication and special effects in the original, such as fades, wipes and lap dissolves also appear in the duplicate. For the present all duplicates will be made at the Kodak Laboratories in Rochester, N. Y.

Afga Ansco announces new low prices on their film. The company stated that these reductions were made possible by the great popularity of the new Afga high-speed emulsions. The price reductions will effect Superpan Press roll film, Superpan and Superpan Press film packs, 35mm. Ultra-Speed Pan miniature-camera film, and 35mm. Infra-Red miniature-camera film. See your local dealer for complete details, or write the Afga Ansco Corporation, Binghamton, N. Y.

A contest for high school students has just been announced by the manufacturers of the Argus Camera. The contest will run for five months from December, 1938, to April, 1939, and \$50.00 in prizes will be awarded each month, with a \$100 grand prize open to the winners of the monthly awards. Any picture taken with an Argus may be entered and entries can be made at your local Argus dealer. See your local dealer for complete information.

The Argus Micrograin Enlarging Easel offers a method of absolutely accurate focusing in projection work. The new easel has a microscope built in the framing easel that permits the operator to focus on the actual grain of the enlargement so that positive sharpness is assured. For further details, see your local dealer or write the International Research Corporation, 210 Fourth St., Ann Arbor, Mich.

G-E Mazda Photoflash Lamp No. 21 announced by the General Electric Co., Nela Park, Cleveland, Ohio, offers a lamp especially designed to meet the exacting requirements of news cameramen. The new No. 21 is as small as a standard 60-watt Mazda lamp, but it emits a flash rated at 50,000 to 60,000 lumen seconds as contrasted to the 45,000 lumen second flash of the larger No. 20 lamp. The new No. 21 lamp is priced at 20 cents. G-E also announces general reductions in photoflood and photoflash lamp prices. See your local dealer for further details or write the above address.

A market for pictures of glass. Here is an opportunity for photographers, amateur or professional, to merchandise good photographs of glass. Carl Byoir & Associates, 10 East 40th St., New York City, are interested in striking photographs of plate glass installations, large mirrors, structural glass, large window areas in homes or business buildings, prisons, hospitals, schools and glass store fronts. Address John Stahr at the above address, sending prints on approval.

The Student's Coloring Outfit. A new coloring outfit, of interest to the amateur photographer, has now been placed on the market by the Peerless Color Laboratories of Rochester, N. Y. The new Student's Outfit consists of a brush, a set of six of the most popular colors and a 32-page book of instructions on the use of these famous water colors. The unit is encased in a cellophane envelope and sells for 25 cents.

Mico Pan Tilting Top is an unusually sturdy tripod head. It is made of solid brass and locks securely in position, excluding all vibration regardless of the size of the camera. The top permits full panorama movement and tilting may be effected to any degree up to a full right angle. The Mico Pan Tilting Top is priced at \$3.45 and is distributed by the Mimosa American Corp., 485 Fifth Ave., New York City.

Solar Enlargers are now under Fair Trade practice, Burke & James, Inc., 223 W. Madison St., Chicago, Ill., announced recently. These popular miniature enlargers are offered in three models for negatives from 35mm. to 2½ x 3¼ inches. A

descriptive circular will be sent free upon request to the above address.

The Rebel Projection Easel, manufactured by A. J. Ganz Co., 112 N. Hayworth Ave., Hollywood, Calif., offers several valuable enlarging features. The paper is slipped into the easel from one end and it thus eliminates the need for lifting and adjusting border clamps. The easel's raised base leaves only the projected image desired in focus. The base is painted dead white and makes a perfect focusing surface. The Rebel Projection Easel is supplied in three popular sizes: 5 x 7 inches, \$1.50; 8 x 10 inches, \$2.00, and 11 x 14 inches, \$2.75. For further details write the above address.

The Kino-Pan-Tilt is a new device for panning or tilting still or movie cameras that offers exceptional ease and smoothness of operation. Presented by Kin-O-Lux, Inc., of 105 W. 40th St., New York City, the Kino-Pan-Tilt will accommodate the lightest 8mm. or heaviest 16mm. camera. It offers a 360° swing to any horizontal or vertical position. Weight is only 2¼ lbs. Kino-Pan-Tilt is priced at \$25.00, and further details may be had from the above address.

Rolleiflex Purchasers Now Get Rollei Magazine Free

Everyone who buys a Rolleiflex camera now is entitled to receive the Rollei Magazine for a full year (four quarterly issues) at no cost.

A postcard addressed to Burleigh Brooks, Inc., distributor, is enclosed in the carton with each Rolleiflex. All the purchaser has to do is to fill in the number of his camera, his name and address, and drop the card in the mail.

The Rollei Magazine is always filled with articles and pictures of special interest to Rollei enthusiasts. It sells for 15 cents per copy at leading photographic stores.

Contax Accessories

The Panflex, which makes of the Contax camera a reflex camera for short-range work, has been added by Carl Zeiss, Inc. to the resources of the Contax camera. A variety of lenses may be used with the Panflex interchangeably.

In addition, as previously announced, Zeiss has the Flektoscope in three models with long-focus lenses, the Sonnar f:2.8, 18

cm., the Tele-Tessar f:8, 30 cm., and the Tele-Objective f:8, 50 cm.

These reflex focusing devices incorporate a mirror coupled with the cable release that operates the camera shutter, so that the mirror is automatically lifted away just before the exposure, and returns of itself immediately after the exposure. The image is viewed under about 5x magnification on a fine-grain ground glass, the center of the field being marked by a small engraved cross. This arrangement eliminates parallax and simplifies handling of the camera.

Sensitizing Ordinary Paper, Fabrics, Rubber and Other Surfaces for Picture Printing Directly from Negative Without Dark Room

Many unique and novel effects are being achieved with a recently introduced sensitizing solution (TRANS-PIX) enabling the picture enthusiast to reproduce prints directly from any negative upon numerous surfaces hitherto deemed unsuitable for picture printing surfaces.

This liquid sensitizing solution is available in convenient, popular priced units and makes it a matter of but a few moments work to secure the unusual effects of actual photographic prints upon a wide and interesting variety of surfaces: Thus, plain, ordinary paper (post cards, books, envelopes, letterheads) as well as handkerchiefs, shirts, cravats, etc., in addition to rubber, leather, even wood being employed during the experimentation.

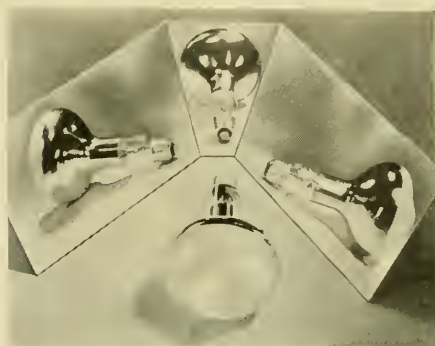
Entire procedure is quite simple. Sensitizer is applied to the area where the print is desired; allowed to dry then contact is made in the ordinary manner, either with printing frame or two pieces of glass, and exposure medium can be either sunlight, photoflood lamp or carbon. Exposure requires from 3 to 7 minutes, longer exposure being harmless. Rich sepia tones soften and beautify the print.

As indicated above, no dark room is required, prints being achieved either day or evening; indoors or outdoors.

After printing, TRANS-PIX photos are treated in usual manner to make them permanent and lasting, i.e., washed in clear, running water; immersed in "fix" and washed again. Fabric prints, etc., can be

washed and ironed without affecting the print.

TRANS-PIX is manufactured by ADOR CO., of 4180 Park Avenue, New York.



Schickerling Mushroom Bulb Pilot Flood

Schickerling Mushroom Bulb Photo Flood Lamp

Elkay Photo Products, 303 Washington Street, Newark, New Jersey, announces what is claimed as the first significant improvement in photographic lighting since the introduction of flood lamps. Now, the user of artificial light will receive a whiter, brighter and more even light with greater economy than heretofore. The new bulb is known as the Schickerling Mushroom Bulb Photo Flood, so named because its main body is shaped like a mushroom. The invention of Conrad Schickerling (famed throughout the radio industry for his advancements in radio vacuum tubes) the Mushroom Bulb has a guaranteed life of 10 hours of peak performance, plus ten to fifteen hours more of adequate working illumination, giving improved color balance throughout.

The unique construction features of the Mushroom Bulb include the concentrated cool coil filament, large heat dissipation area, much higher actinic value, silver nitrate and aragon filler and an ultra high vacuum. It has an inside nitrate silver reflector and an outside frost diffuser.

Due to the unusual filament design, the Mushroom Bulb projects a very white light with an extensively improved red actinic ratio. The nitrate silver reflector further aids this phenomenon.

The Schickerling Mushroom Bulb has already been well received by serious pho-

tographers as an outstanding contribution to accuracy in lighting. It may be used in all phases of photography where artificial light is needed—in the home, studio work, copy work, commercial photography, laboratories, still and moving pictures. Moreover, it will be welcomed by photographers

because of its long life and resulting economy.

This bulb operates on either AC or DC, 8 amperes at 120 volts, 38,000 lumens. It sells for only \$1.00 each. For complete details, write to Elkay Photo Products.

Our Book Shelves

Print Finishing, by William Mortensen. Published by Camera Craft Publishing Co., San Francisco. 128 pages, 6¾"x9½", 89 illustrations, cloth bound, \$2.50.

This book is of more than usual importance, for upon its publication all important aspects of Mr. Mortensen's remarkable technique become available to the photographic public for the first time. Both Mr. Mortensen and his publishers have been aware of the difficulties confronting the thousands of photographers who are working with the Mortensen procedures because of the lack of this important part of his photographic system. However, the pressure of his work as a teacher, plus the difficulty of getting the material in this book into thoroughly understandable form, have made its publication impossible until now.

The first part of the book is concerned with a minute step by step description of Mr. Mortensen's justly famous Abrasion-Tone process. By means of this process the photographer is able to effect a vast improvement in the quality of his finished print. The amount and scope of such improvement is hardly believable unless one has seen a set of before and after prints such as are shown in the book. The improvements are brought about by adjusting tone values and eliminating blemishes. It should be clearly understood that the process does not include any drawing by hand on the face of the print. While the process is of great help to any photographer, replacing as it does the much more difficult, laborious, and unsatisfactory procedure of retouching the negative, it is a particular boon to the miniature photographer who is limited by his negative size to work on the

print. It should also be realized that while even the most expert retouching of the negative will quickly show up as hand work, good work in the Abrasion-Tone process does not. In the latter part of the book the problems of mounting and framing the print for display are thoroughly discussed. So far as we know this is the first time that both the artistic and the technical aspects of mounting and framing have been exhaustively dealt with.

Clarity and readability of text plus thorough illustration, are characteristic of all Mr. Mortensen's writing. He always does a first rate job.

Champlin On Fine Grain—Second Edition, by Harry Champlin. Published by the Camera Craft Publishing Co., of San Francisco, Calif. 154 pages, 5¼x7¾ inches, \$2.00, cloth bound. Harry Champlin has excited and aroused miniature camera enthusiasts as has no other writer of the day. The pot of discussion has boiled and simmered throughout the entire world, and there is no doubt that his formulas and theories have done much to carry photographers toward their goal of technical perfection.

In the Second Edition of his book, Mr. Champlin is concerned primarily with his new Formula 16. It offers many startling advances in developing technique and in the author's own words, "I know Formula 16 is superior in tone quality and emulsion speed to any developer recommended for fine grain work. For the first time, since I have been delving into photochemistry, I have felt the satisfaction of knowing that every roll I develop in Formula 16 will have exactly the same density, tone quality and grain structure."

Briefly, Formula 16 offers: grain structure one-third finer than Formula 15; tone quality over a wide latitude of exposures; latitude in developing time and in temperature; it is very simple to mix having only three ingredients, besides water; it is prepared in an inexpensive concentrated form and is used only once. The formula also eliminates the dangers and annoyance of poisons or stains.

Many of the causes of failure have been eliminated or considerably reduced by Formula 16, but as Mr. Champlin points out, there is only one way to obtain the best results and that is to proceed along a rigidly proscribed course. The author gives full and precise details on this one sure laboratory tested way.

Mr. Champlin opens his book with a detailed explanation of darkroom procedure. Each step is carefully explained, with many hints and warnings that are the result of his long experience.

Next, he discusses the relationship of exposure to development and suggests an experiment that every photographer should perform to familiarize himself with his camera, lens, film emulsion and developer.

The author then proceeds to study the growth of fine grain developers and analyzes some of those in use now. Following this, Mr. Champlin explains the experiments that led him to his developers, discussing the reasons for the development of each one and culminating the discussion with Formula 16. In response, to a flood of letters, the author also discusses the reasons why some amateurs fail to obtain satisfactory results. The prime cause of failure being carelessness and Mr. Champlin points out again the necessity for proceeding carefully through a rigid routine.

The appendixes give a complete list of film speeds with minimum, average and maximum emulsion speed ratings for all films for development in Formula 16, plus development times at all recommended temperatures. A detailed reference list of general chemicals used in photography is also given.

In closing, let us prophesy that Harry Champlin will once more set the miniature camera world agog with Formula 16 and that this new formula will keep his detractors awake nights.

Snow and Ice Photography, by H. W. Wagner. Published by the Camera Craft Publishing Co., of San Francisco, Calif. 96 pages, 5¼x7½ inches, \$1.00, paper binding.

If you are not already an enthusiast of winter photography, we'll venture the guess that, once you have seen the illustrations in Mr. Wagner's book, you'll be in a lather to try it yourself. These photographs, by the author and others, show the wide range of subject matter and the great beauty that winter brings before our cameras.

We don't like to harp upon one subject unduly, but we feel that the captions of these same illustrations are a splendid photographic lesson in themselves. Complete data is given on each print, as well as the special problems and difficulties involved and also the artistic conception and composition.

The illustrations ran away with us and we were carried along from one to the other and we couldn't stop to go back and see why they were marked Figures 1, 2, 3, etc. After finishing the illustrations, we found the text well up to the standard they set. Mr. Wagner covers his subject in thorough-going detail. He discusses all the technical aspects, including the many special problems that confront the photographer in winter. Negative emulsions and exposure, developing and printing are considered in connection with this special subject. Equipment is another consideration. (We intend to follow Mr. Wagner's suggestion to dress warmly for just looking at the pictures set our teeth to chattering.)

The artistic aspects of snow and ice photography are also discussed in detail. It is interesting to note, both from the illustrations and from the lists of picture possibilities the author gives, just how wide a range of subject matter winter offers us. It would take a long, hard winter to sample a small part of them.

Composition is presented simply and clearly and a few horrible examples are included to guide the beginner away from the more obvious pitfalls.

Throughout the book, Mr. Wagner sprinkles bits of advice that will prevent a misstep here and save a picture there. It is information like this, born of long

experience, that will save those who follow in the author's footsteps many wasted hours and dollars.

Perhaps, we should say just a word about the author. Mr. Wagner is an internationally famous salon exhibitor, who has for many years made pictures of snow and ice his primary interest. His book shows how well he has spent his time and we feel sure it will win many new friends to photography in winter.

Modern Portraiture, by Stanley R. Jordan. Published by the Camera Craft Publishing Co. of San Francisco, Calif. 200 pages, 6x8½ inches, \$3.00, cloth bound.

Here is a complete system of portraiture incorporating the most modern and up-to-date methods.

The author has practiced portraiture professionally for many years, but more important, he has been a thorough, progressive and energetic student of his profession.

Realizing that great strides toward photographic excellence were being made by the technicians of the Hollywood motion picture industry, Mr. Jordan felt it necessary to study their methods at first hand. After a thorough study of Hollywood techniques, the author adapted their methods to still portraiture and incorporating the results of his own experience and other studies, this book came into being. It is only natural that two of the most interesting and informative sections of the book would be those on panchromatic makeup and lighting, for these are the subjects in which Hollywood excels and they are also entirely new and interesting to most of us. We do not say this in the sense of slighting the rest of the book, which is excellent, but rather to emphasize two particularly important aspects of this book. Mr. Jordan studied panchromatic makeup in the world famous Hollywood Salon of Max Factor, and his book presents each step of the process carefully illustrated and explained. A single makeup is impractical for the many different types of subjects the portraitist meets and Mr. Jordan describes makeups for every type and kind of subject.

Jordan's lighting system, which is also based on his studies in Hollywood, is called "zone" lighting. Instead of specifying that

a light be placed at point A in the diagram to attain a certain type of lighting, Mr. Jordan has devised a system of "zones" within which the lights may be moved to obtain variations of specified effects. Thus, we have a zone of main light and a zone of secondary light; a zone of flat lighting, a zone of 45° light, and a zone of contrast lighting, etc. These zones are all carefully related and arranged in a unified whole and because of the freedom allowed the photographer offer infinite possibilities within a sound framework of balanced lighting. The "zone lighting system" also indicates the most suitable lighting for various types of faces.

We have emphasized panchromatic makeup and "zone lighting" at the cost of neglecting the other valuable sections of this book. Below we give a brief outline of the book's subject matter which covers every detail of portraiture.

First, Mr. Jordan deals with the studio and equipment and then with "zone lighting," already discussed. After an exposition on the best exposure and developing procedure, the author concerns himself with the problems of the photographer before the sitting and then with makeup. Next, he discusses the elements of posing, following which there are separate chapters on the portraiture of men, women and children. He also offers chapters on portraits in the "Hollywood Style," outdoor portraits and on home portraiture.

ANSWERS TO "WHAT IS YOUR PHOTOGRAPHIC I. Q.?"

(From page 31)

1. pd. The correct abbreviation for pound is lb.
2. Champlin 16 and Eastman DK-20.
3. Deep red. For strong contrast together with panchromatic film this is the ideal filter to use.
4. The Story Of A Face. This is a new book which will be available toward the end of December. Print Finishing is Mr. Mortensen's latest book, published December 20th.
5. Eight To make 28% acetic acid from glacial acetic acid, dilute three parts of the latter with eight parts of water.
6. 1.2. The higher the numerical value of gamma the greater the contrast.
7. The Pack Rats in 1936.
8. Less. The depth of field is always less in front of the object focused upon than it is beyond the object.
9. Films. Reticulation is a peculiar condition occurring on films due to local strains in the gelatine which may be caused by sudden changes in temperature of solutions. The emulsion breaks down in varying degrees, taking on the appearance of an aged man's skin.
10. Calotype. This process was the first paper negative process, invented by William Henry Fox Talbot in about 1835.

CAMERA CRAFT

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"My Dog"

Lajos Gyorffy-Villan, Hungary

22nd Los Angeles International Salon

January 1939

TOGRAPHING CALIFORNIA . . .

VORY TOWERS . . .

ING PICTURE ESSAYS . . .

PRICE 25c

Edward Weston

Milton Inman

Robert L. Pickering



WILLIAM MORTENSEN

NOT BY THE MASS PRODUCTION METHODS OF ORDINARY CLASS WORK . . . BY THE CAREFUL PERSONAL AND INDIVIDUAL TRAINING OF A SELECTED NUMBER . . . PATTERNED ON THE TEACHING METHODS OF THE MASTERS . . . WILLIAM MORTENSEN INSTRUCTS HIS STUDENTS IN PICTORIAL AND PORTRAIT PHOTOGRAPHY.

BROCHURE ON REQUEST

MORTENSEN SCHOOL OF PHOTOGRAPHY
LAGUNA BEACH CALIFORNIA



"Winter Eve"

Gustav Anderson

22nd Los Angeles International Salon

No Ivory Towers

Milton Inman

CAPTURED, but not captive, were the life and times of 1938. Timeless beauty, passing fancies and the struggles of the days were the targets of the photographers' eyes of the past year. Witness the pictures of the 22nd Los Angeles International Salon which opened the New Year in the redecorated galleries of the Los Angeles Museum. A Century in the future historians may still be quarrelling about the color of our maps, which have hastened to match the newness of millinery styles, but if they want to know what we saw, what we thought and what we did and what was in our hearts let them reserve judgment until they have seen our pictures.

The Artist is not a mirror reflecting but the specific and immediate facts of life. The photographers who exhibit in the Salon are essentially no different from other artists who write music, plays and poems or paint or model, except that most photographers are not driven by the necessity of making their pictures earn them a living. Free from necessity the photographer rises to his best when he translates the significant and universal, stirring our senses and imagination to beauty and to truth. Judged by this standard would the Salon fare better or worse than the music, than the painting, than the poetry of the year? If we want to be personal we can judge by the delight, the pleasure, the joy and happiness that photographers bring us.

As we look back over the short history of pictorial photography, it would be tempting to say that this is the Golden Age, that we have stopped



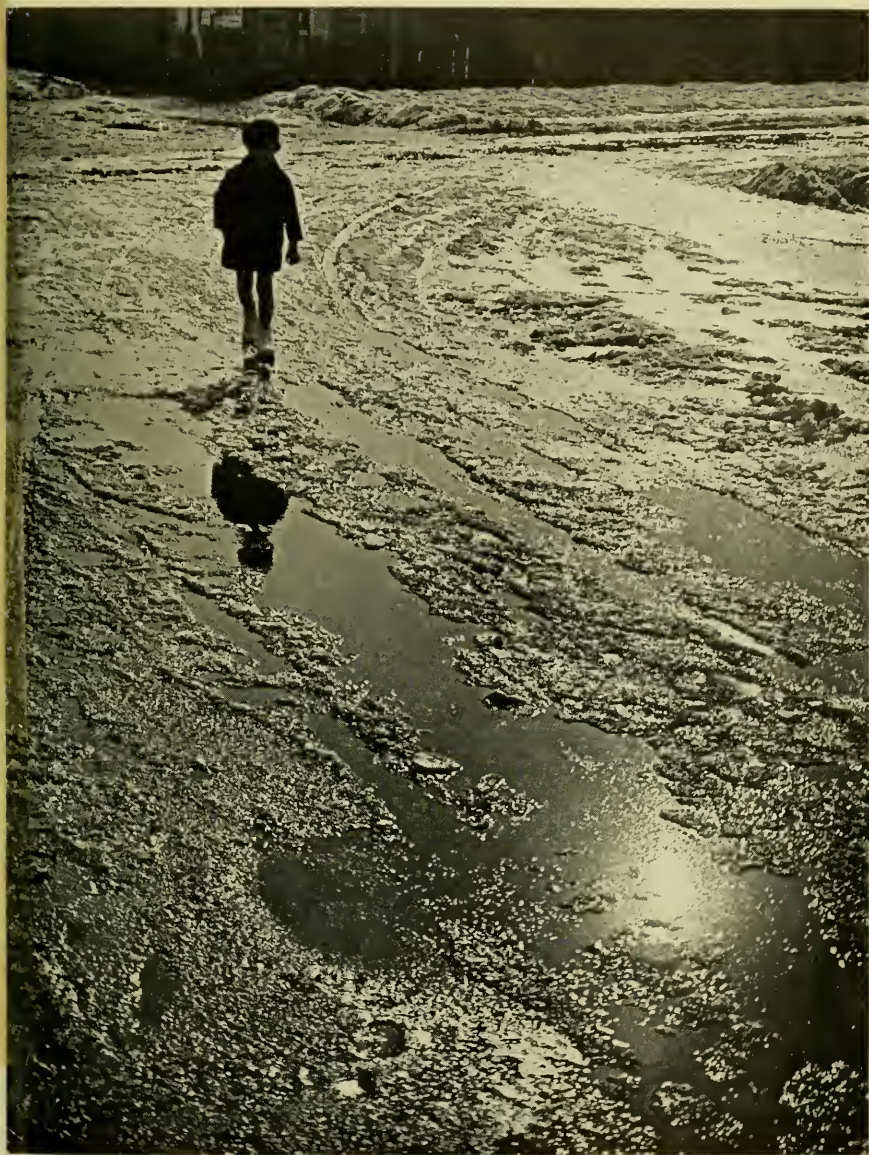
"St. Nicolas"

Carlo Matis, Italy

22nd Los Angeles International Salon

the swing of the pendulum and determined the mode of the future. Of course, the 22nd Los Angeles Salon will make its mark on the history of photography, but it is only a beginning, a stage in the development of a young, but lusty art. For those who expect too much, who look at the 3,000,000 cameras in use, the square miles of film and paper coated, and the tons of hypo used, the accepted prints in any salon is not encouraging. Neither is there comfort in the tons of paper and ink used in a metropolitan newspaper. Considered in terms of satisfaction of pure accomplishment the salon is a worthy and important achievement. The step-child of Art no longer argues with its unwilling foster parents. Photography has much to learn and is learning rapidly, but it can and does stand on its own feet and even contributes a little now and then to help the old folks out, particularly since they have shown signs of second childhood. The growth and influence of the salon has gone hand in hand with the rise of photography, and who is to say that photography is at a standstill.

Trends which have been noted for several years, have been true of the Los Angeles Salon, as well as other major exhibitions. Print and negative quality is progressively improving, credit for which is due the manufacturers rather than us photographers. To avoid brickbats from exhibitors and bouquets from Eastman, Agfa, Weston and Company, may I say that we are learning to use the materials, to get somewhere near the quality that good materials are capable of producing. Ten years ago good print quality,



"The End of Winter"

Miklos Tolnai, Hungary

22nd Los Angeles International Salon

Photographing California

Edward Weston

I HAVE long been aware of the potentialities for mass-production in photography—not only mass-production in duplication of prints, but mass-production in seeing. A painter of prolific imagination might not be able to execute a hundredth of his ideas on canvas in a lifetime because of the time consumed by his recording process. But for the photographer seeing and recording are almost simultaneous. His output is limited only by his ability to see. For this reason it has always been my belief that an experienced photographer, given the means to devote himself entirely to creative expression, should be able to produce a tremendous volume of valuable work.

I had an opportunity to put this theory to the test in 1937 when the award of a Guggenheim Fellowship made it possible for me to spend a year photographing without thought of cost. For the first time in my life I did not have to make professional portraits to support myself and my creative work. The result was that from April, 1937, to April, 1938, I traveled twenty-two thousand miles and made over twelve hundred 8 x 10 negatives. I accomplished more than I would have in ten years under ordinary circumstances.

My project was officially called THE MAKING OF A SERIES OF PHOTOGRAPHIC DOCUMENTS OF THE WEST. Actually it was not at all documentary in the present popular sense of the word. I have not attempted to make a geographical, historical, or sociological record. My work this year as in the past has been directed toward photographing Life. I have not been concerned with making records, cataloging subject matter. Rather I have tried to sublimate my subject matter, to reveal its significance and to reveal Life through it.

This is a project that could have been carried out just as well in No. 10



"Edward Weston"

Willard Van Dyke

Scotia or Siam. I chose to work in the West, and here in California especially, because of the tremendous variety of subject matter to be found here. For instance: one day I was photographing along part of the old Butterfield Stage Route on the Colorado Desert, with the temperature around 120, heat waves shimmering over the dry washes. The next day I was up in the Laguna Mountains, among green meadows, brooks, and shady trees, looking down over a mile on the desert track I had crossed the day before. This is the kind of sudden contrast that makes California an exciting place to work. And because this kaleidoscopic quality of the state appeals to me so strongly, my secondary aim has been to record it. In this I feel I have succeeded, although many Californians would think it no record at all, since it includes no missions, no full length sequoias, and no orange-groves-against-snow-clad-peaks.

Neither are there many people, and those that do appear are seldom over an eighth of an inch high. I carried no equipment suitable for doing people or action, because I did not want to mix two approaches and two kinds of work.

The twelve hundred negatives are not all masterpieces. Life is not

lived entirely on the heights; the lesser elements are just as important in the scheme of the whole, and a true record of life must of necessity include them. I have said I never make a negative unless emotionally moved by what I see on my ground glass—but there are degrees of emotion.

Because I had never done such concentrated work under such varying conditions before, this year of travel and photographing brought numerous problems to be solved and lessons to be learned. I would have had an even more productive year if I had known at the outset all that I do now. So, in answer to several requests for information of this nature, I am setting down something of my method of procedure and the technical difficulties encountered, in hopes that others may benefit by my experience.

In choosing equipment there were two points to be kept in mind: (1) that all money saved on general equipment would mean more films, more travel; and (2) that all time saved by simplifying equipment and daily procedure meant more time for photographing.

The first and most important item was a car. Since I don't drive there was always at least one other person along. Considering the bulky equipment to be carried, we decided to get a touring sedan, and by luck I was able to get a new one rather than the second-hand one my budget allowed for. In a less reliable car I would never have risked some of the cow tracks we have been over. Other equipment consisted of sleeping bags, tent, gasoline stove, cookset, shovel and axe, two 2-gallon canteens and a pint one, thermos bottle, drycell lantern.

My photographic equipment was equally simple:

8 x 10 Century Universal Camera

Paul Ries Tripod with tilting top

Focussing cloth

Triple convertible Turner Reich lens, 12", 21", 28"

Lens shade (Worsching Counter Light Cap)

12 film holders

K2, G, A, filters

Weston meter

(19" element of a Zeiss Protar added later in the year)

2 small camera cases which hold all above equipment except tripod

Insulated wooden box to protect films.

Working out from a base, Los Angeles for the south and San Francisco for the north, we made trips that covered from a hundred to over a thousand miles and lasted from one to three weeks. For travel in all varieties of climate from coast fog to desert heat I had decided that three weeks was about the limit of safety for keeping exposed films undeveloped. We always started out with a rough itinerary in mind which was subject to change at any time. Weather conditions, unexpected discoveries, might completely change our route, or keep us a week in territory we had expected to pass through in an hour. Since we had no destination, no need to get anywhere, each day was a law unto itself. Our average speed was 35 miles an hour. In long open desert stretches it might be 25 or less. I kept my camera set up in the back seat so that when something had to be caught in a hurry—clouds, or a landscape in changing light—it would be a matter of seconds to stop the



"Sandstone Concretion—Salton Sea, 1937"

Edward Weston



"Furnace Creek Wash—Death Valley, 1938"

Edward Weston

car, set up, and focus. When there was enough to do to keep us in one place several days we usually put up the tent so as to have a place to leave the bulk of our equipment.

Some days I would travel without making a single exposure; some days I would use the whole twenty-four. Twenty-four is a big day's work for me since I never make duplicate negatives (except occasionally for clouds, breaking waves, or other moving subject matter). This is an important part of my approach: I feel there should be no guess work, nothing left to chance, in what I am doing. One negative should be sufficient.

In the mornings we were usually up at dawn. Often I would work until dusk and we would have to scramble for a camping place in the gathering darkness. But only twice in the summer and fall months were we thwarted in finding one and forced to turn to auto camps for shelter. When dinner and loading were over we were usually tired out and ready for our sleeping bags. We carried none of the usual camper's culinary necessities: flour, bacon, etc. Time was too important to be wasted on cooking. We had one hot meal at night, a stew, made by combining the contents of several cans. During the day we would have any number of snacks as hunger dictated and for these we took Swedish bread and whole wheat crackers



"20 Mule Canyon—Death Valley, 1938"

Edward Weston

(which do not mould or dry up as bread would), a whole Monterey jack cheese (which ripens beautifully in changing climates), nut-butter, jam, honey, powdered milk, and dried fruits. At the start of a trip and when we passed through towns these were supplemented with fresh fruit and milk, butter, eggs, etc. Neither did we allow time off for wash days, but carried sufficient changes of clothing to get us through the whole trip.

I have gone into these facts at some length simply to stress this point: without such thorough simplification in our daily living I could not have made the twelve hundred negatives. The photographer's watchword (like the Boy Scout's) is preparedness. He must be always anticipating, always ready, to capture and reveal the moment at its most important. The photographer's eyes must be at work as long as there is light—and this is true more than ever in traveling when new sights are constantly appearing and disappearing and his decisions must be made rapidly and surely.

The first trips, in Death Valley and on the Mojave and Colorado deserts, brought the greatest working difficulties of the year. When the thermometer tops a hundred, black camera cases heat up like ovens, so the first important requisite for desert work is to have them painted white. A black rubberized focussing cloth will actually burn your head, and any



"Texas Springs—Death Valley, 1938"

Edward Weston

black material will make focussing an uncomfortable chore. I solved this problem with a home-made focussing cloth: two layers of black sateen topped with one layer of white (the pieces sewed together so that no stitches pierced all three layers), the whole thing two yards square. Since there is also the desert wind to reckon with size is as important as color. Secured with clips at the back of the camera, this focussing cloth is large enough to anchor securely around you in a high wind.

The problem of camera rigidity was not so easily solved. I have yet to find a view camera with a really rigid front, and mine, on windy days with bellows fully extended (32 inches), performed as though afflicted with St. Vitus dance. As I often stop down to $f:256$ to gain depth my exposure may take several seconds, and I have had to wait, with slide pulled, sometimes ten minutes for a lull in which to get my picture. In brilliant desert sunlight, this is too severe a test for any camera, and fogged negatives are bound to be the result. But an occasional fogged negative was not the worst of it, for often by having to wait for the wind to go down, I would lose the light I wanted on a subject or the clouds would change, and my picture would be gone before I had a chance to make an exposure.

Finally I solved this problem by having a brace made which fits on



"Joshua Tree—Death Valley, 1938"

Edward Weston

the camera above the bellows, one end attaching at the back of the camera, the other at the top of the front board. It is a telescoping rod which can be loosened when focussing and tightened at the desired bellows extension. This makes the front perfectly rigid and also provides a handy support for sagging bellows.

I had some memorable film loading experiences on the first trip because I had not counted on the force of the wind. My plan had been to put blankets over the windows at night and do my loading in the car. The first night out we were camping near Victorville on the Mojave Desert, and by the time we had finished dinner a stiff desert wind was blowing. Accordingly we put the blankets over the car and weighted them with canned goods, boots, etc. But the night was bright with starlight and this was not enough. So the sleeping bags were unrolled and draped over the car sides—a satisfactory arrangement until a really strong gust of wind hit the car broadside peeling off blankets and bags and sending canned food, boxes, and boots clattering down the wash. Luckily the denuding took place just after I had packed the exposed films and before I had unwrapped fresh ones, and no damage was done.

An even more terrifying loading adventure took place on the last night of this trip when we were camped in Red Rock Canyon. That night

the wind was so strong there was no question of keeping anything over the car—it would have been physically impossible. So I sat on the floor of the car and draped a blanket over me from the back of the front seat. Then to my horror, every time I drew out a slide—no matter how slowly—flashes of static electricity would illuminate my “darkroom.” I was sure that all of these negatives would be ruined, but they were not damaged, the eye accustomed to darkness being prone to exaggerate the amount of light. Tiny zigzag lightning patterns were barely discernable on one or two of the negatives but were not strong enough to show in a print.

After these adventures I got a heavy weight tarpaulin, big enough to cover all car windows when folded double and easy to make secure by passing a thin rope around the car under the doorhandles, hinges, and the handle of the luggage compartment. This arrangement has stood the test against both high wind and strong light.

There are two kinds of photographic equipment I neglected to mention: spares and cleaners. From the first I have carried spare ground glass, wire release, tripod leg, and tripod screws—the only effective kind of accident insurance. Equally important are lens tissue, camel hair brush, and a good pair of lungs, for camera and equipment must be cleaned daily on the desert to avoid hours of spotting later on.

Of course things do happen on the desert that no amount of foresight can prepare you for.

One night on the Mojave, just as I was ready to begin loading, a horde of caterpillars decided to migrate across our camp. All at once hundreds of them were advancing on us, so it was a choice between having caterpillars in sleeping bags and food or packing up and finding another camping place. We chose to leave.

People who see the deserts only from main highways or train windows often suppose them to be monotonous wastes, but the California deserts, like the rest of the state, contain a great variety of subject matter. The photographer who wants to really see the desert must go prepared to forsake main travelled roads for twisting sandy tracks and boulder-strewn dry washes. Only by traveling the deserts' own roads will he find the wealth of material they have to offer. From sandstone concretions around the Salton Sea to yuccas and granite piles on the Mojave to the badlands of Death Valley—there is enough material to keep a hundred photographers busy for years to come.

This is the first of two articles in which Mr. Weston will discuss various problems of handling the camera, in addition to describing his travels under the Guggenheim Fellowship. This article has been devoted largely to work on the desert. Next month he will discuss problems encountered along the northern coast, in the redwoods, and in snow.—Ed.

Making The Picture Essay

Robert L. Pickering

TO SEE life; to see the world; to eyewitness great events; to watch the faces of the poor and the gestures of the proud; to see strange things—machines, armies, multitudes, shadows in the jungle and on the moon; to see man's work—his paintings, towers and discoveries; to see things thousands of miles away, things hidden behind walls and within rooms, things dangerous to come to; the women men love and many children; to see and to take pleasure in seeing; to see and be amazed; to see and be instructed.

Thus to see, and to be shown, is now the will and new expectancy of half mankind.

To see, and to show, is the purpose of this new magazine.

The prospectus of *Life* in these poetic words delineated merely the editorial aims of the publication. It is impossible to say whether even the editors themselves knew then that *Life* would create a new editorial technique that could alter so many of the nation's magazines.

For the fact is that the picture essay, used first in *Life*, has since been adapted not only by other picture magazines, but by general magazines, by special-circulation magazines, by regionals, by trade journals and house-organs. In some fields, the technique has only recently been fully developed into an adequate adaptation or "editorial slant." In other fields, some pioneer magazine took up the popular trend and strode far ahead of the pack until the pack had had time to study this novel development.

That almost every type of magazine except the "pulp" goes in for pictorial journalism is a fact important to photographers.

Raw materials for the first photo essay was submitted to the editors of *Life* in 1936 by Margaret Bourke-White. It was published by an amazed

and doubting set of men in the first issue of the magazine, and it took up the first nine pages of that historic issue. It was the story of the frontier-like civilization of the people working on the Columbia River Basin federal dam project. Bourke-White was at the time best known to magazine editors as the leader of a new school of industrial photography, originated on the pages of *Fortune*. But a strong extra-curricular social consciousness and some recent experience in her own commercial studio combined to make the eminent lady submit, instead of typical Bourke-White construction pictures, photographs which *Life's* editors termed a "human document of American frontier life which . . . was a revelation." An editorial introduction to the first issue made it clear that if any charter subscriber to the magazine was surprised at the first story in the first issue, "he is not nearly so surprised as the Editors."

The picture essay as used in a pictorial journalistic magazine is not composed merely of photographs. The pictures of the town and the people of Wheeler, Montana, would not have made a picture essay all by themselves. It was only when the editors of *Life* headlined the story "Franklin D. Roosevelt Has a Wild West," and wrote about 1,200 words of explanatory story and captions that the thing became characteristic of the pictorial journalism of *Life*, that it became a Bourke-White picture essay. The editors of *Life* rarely have much information on a subject when they assign one of their photographers to take a pictorial series. They depend on the staff man for much of the story that will accompany the pictures. In other words, the photo-essayist is more than a technician. He is also a reporter. *Life* expects him to be more than just an average reporter, too. *Life*, says Photographer Horace Bristol, expects the staff photographer to go out and to study the subject to which he is assigned before he thinks about either technique or art. He should become familiar with the subject, get its organization and all its phases outlined in his mind so that he will know beforehand the significance of each photograph he is taking. All any pictorial magazine asks in the way of craftsmanship is a clear, sharp picture with solid blacks, good contrasts and not too much complication. Values of modeling or composition are not so important as is mere instruction: *To see and to show . . .*

After the first burst of imitative pictorial magazines, it wasn't long before several general magazines, such as McCall's, initiated departments having a strong flavor of pictorial journalism. Still, the pictorials retained a virtual monopoly on the picture essay. Some of the most interesting adaptations of the story-in-pictures technique to publications of a different type have been developed on the Pacific Coast. One of these experiments which attracted wide attention in its own field and among editorial and advertising men was *Food*, a magazine for grocers.

This monthly was established in San Francisco in early 1937, less than six months after *Life's* debut, and the picture essay was conspicuous in its pages. Its editor, Douglas G. McPhee, appears to have been one of the first to recognize the possibilities of such treatment for stories designed primarily to teach rather than to inform. Articles in *Food*, designed to show how successful merchants operate, relied mainly on a series of pictures in which the subject of the story was photographed going through the day's

FOOD in the REDWOODS

**HUSKY MEN WITH KEEN APPETITES
DEMAND ABUNDANT AND GOOD FOOD**

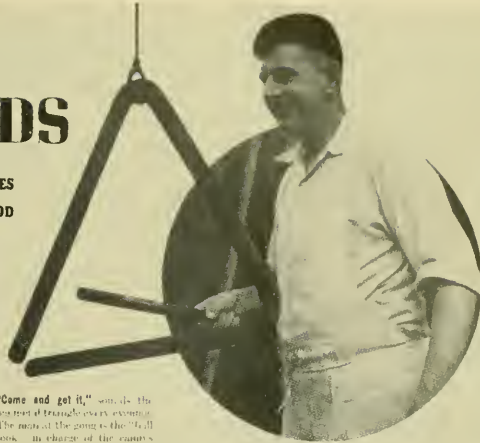
Photographed at Santa, 1936, by Horace A. Bristol



This bucker is cutting a redwood, nine feet in diameter, into logs with a chainsaw. Although machinery is used when possible, lumbering involves a lot of strenuous, physical labor. After a day of this work, a man is ready for the best the cookhouse can offer.



No time is lost when the men go to camp. Twenty-five minutes after an end-of-day signal, all lumbering for the cookhouse door. Soup, salads and breads have been prepared and the bulk smoking can start eating at once.



"Come and get it," sounds the loudest of triangle every evening. The man at the point is the "hall cook," in charge of the camp's food supplies and kitchen.

BEANS with slices of salt pork or bacon, biscuits and black tea, strong enough, it was said, to float a teaspoon, were about the only foods on the menu of early lumber camps. Today a camp wouldn't keep its crew twenty-four hours with that fare. Lumbering operations have changed, particularly in the redwood region of northwestern California, and the type of employee has changed with them. Trees are harvested now, not cut indiscriminately, and it is no longer necessary for the camp to keep constantly moving after a receding timberline. The men are permanent employees; a large proportion of them are high school graduates from nearby towns, and many of them step into jobs their fathers held before them. These men demand choice, well-cooked meats, a variety of vegetables, fresh dairy products and rich desserts. Food, lumber company officials say, is the most important factor in keeping the men content, and the western lumberman is the best fed laborer in the world. The pictures show activities in camps of the Pacific Lumber Company, one of the West's largest.

Caulk marks from the lumbermen's hands have permanently scarred the cookhouse doorway and floor. Eating is a serious business in the redwoods, it is done with no waste or time or effort. In twenty minutes the men will consume a supper consisting of soup, salad, cold meats and cheese, three hot meats, potatoes and five vegetables, plus coffee, three or four desserts and a beverage. Talking and smoking are traditionally prohibited at meal time.



Figure 1

First Page of a Well Planned Picture Essay

Reproduced Through the Courtesy of FOOD, San Francisco

Photographs by Horace Bristol

routine. Another new departure, highly unorthodox for trade publications, was a regular picture essay showing the preparation and use of food at various famous, glamorous or unique places—e.g., Food in the Redwoods, Food at Sea, Food at Del Monte, Food at the Big Game.

Horace Bristol, at that time already a frequent contributor to *Life*, was *Food's* picture-essayist. As an example of the new technique, Bristol's "Food in the Redwoods" is instructive. Bristol gathered, in addition to a series of technically and artistically excellent pictures, a fund of factful, picturesque caption material for the editor to rewrite. In other words, he did a job of reporting. The finished product is one of the best picture essays in or out of *Life*.

As an example of the sort of foundation-stuff that the photo-essayist must turn in with his glossy prints, let's look at a few of the captions for the "Food in the Redwoods" story. First, the general introduction:

"Beans with slices of salt pork or bacon, biscuits and black tea strong enough to float a spoon, were about the only foods on the menu of early lumber camps. Today a camp wouldn't keep its crew twenty-four hours with that fare. Lumbering operations have changed, and the type of employee has changed with them. Trees are harvested now, not cut indiscriminately, and it is no longer necessary for the camp to keep moving after a constantly receding timber line. The men are permanent employees; a large proportion of them are high school graduates from nearby towns, and many of them step into jobs their fathers held before them. These men demand choice, well-cooked meats, a variety of vegetables, fresh dairy products and rich desserts. Food, lumber company officials say, is the most important factor in keeping the men content, and the western lumberman is the best fed laborer in the world. The pictures show activities in camps of the Pacific Lumber Company, one of the West's largest."

A caption: "This buckeer is cutting a redwood, nine feet in diameter, into logs with a dragsaw. Although machinery is used where possible, lumbering involves a lot of strenuous, physical labor. After a day of this work, a man is ready for the best the cookhouse can offer."

Another caption: "No time is lost when the men get to camp. Twenty-five minutes after arriving, they are washed and hurrying for the cookhouse door. Soup, salads and biscuits have been placed on the tables so they can start eating at once."

Notice all the solid information packed into each sentence of the legends to these pictures. It takes a lot of familiarizing and plenty of reportorial prying to learn the really interesting facts about an institution like a lumber camp . . . or any other subject that might be ordered by a magazine.

Food's editor, Douglas G. McPhee, took on a new assignment in June, 1938, and applied the photo essay method to still another type of journalism—the house-organ or employee magazine. The typical house-organ is even more benighted, from a photographic standpoint, than even the trade publication. The employee magazine usually looks like (and often is) an amateur effort, even though its circulation may run into many thousands, and far exceed the distribution of most trade or technical journals. A few progressive firms, however, recognize that the employees for whom their



Figure 2

Showing Pages 2 and 3 Which Complete the Picture Essay Begun in Figure 1
 Reproduced Through the Courtesy of FOOD, San Francisco
 Photographs by Horace Bristol

house magazines are edited are exactly the same persons who buy and read *Life*, and appreciate the necessity for gaining their attention and interest by the same means. Such an institution is Safeway Stores, Inc., which publishes at Oakland a monthly, *Uno Animo* (Of One Mind) for its employees in 25 states and five Canadian provinces. Editor McPhee, retained by Safeway to edit this magazine, carried his pictorial-journalistic ideas into its pages.

The job of the house-organ is to teach. Teaching, through articles of the old type, often becomes preaching. The picture essay makes its point by telling, rather than preaching. In *Uno Animo*, a major feature in each issue is a photo essay which, through the medium of from fifteen to twenty photographs of storemen and customers actually at work in stores, presents to Safeway employees the better ways of carrying on the organization's work of economical, courteous food merchandising.

The photo essay in a trade journal or house-organ necessarily differs in mechanics from the photo essay in the pictorial or general magazine. Usually, it starts with a carefully prepared script, which outlines the progression of pictures and indicates what each is supposed to show. If models and special settings are required, they are lined up as the next step. Then the photographer moves in with lights and camera, often with an editorial assistant to make sure that nothing essential to the developing story is omitted. It is the photographer's job to interpret the editor's script,

or to alter and adapt it as necessary, to make it fit the practical necessities of the lens. The editor goes to work again when the pictures are ready, and, with the aid of a layout man, typographer and artist, must combine the elements of the picture essay so that photographs and captions work together, each complementing the other, in a swift-moving story that conveys its message in memorable, graphic form.

Safeway is not the only large business firm that has recognized the superiority of the picture to a dry manual or eloquent exhortation in type as a means of teaching and leading employees. One of the outstanding house-organs of the nation is General Motors' *Folks*, which out-*Lifes Life*. It simulates *Life's* style and makeup even to duplicating its type faces. In many another house-organ the picture essay's influence can be recognized in tendencies if not in actual adoption.

Coast, a general-circulation monthly magazine concerned with the culture of the Pacific Coast, examines and reports on various aspects of life, the social order and the industries of the seaboard states. For the past year the editors of this magazine have been running picture essays in the *Life* manner. Unlike most magazines, not all of *Coast's* picture essays are assigned. The editors occasionally accept a free-lance job that tells a good story. Explaining the technique of photographic journalism embodied in *Coast*, Editor Christopher Rand says, "We're not interested in just beautiful photographs. They must have a point, or give information on an aspect of the Pacific Coast that is uncommonly interesting and not generally known about." A *Coast* specialty in this field is the magazine's attempt to inject sophisticated humor into the essay portion of the pictorial series. Flip editorial comments are especially noticeable in the picture essay on Kenny Washington, the UCLA football player:

"Washington's greatest assets are his knees, which were broken in a childhood bicycle accident. They healed crookedly, in such a way as to make his lower legs spread apart like flying buttresses. This anatomical quirk makes him able to dart off in almost any direction without giving his intentions away beforehand, and he has further improved things by developing a tricky body weave that makes him equally deceptive on top."

Examples of the subjects covered by *Coast* picture essays are: "Sky Sloops" (soaring); "Bobby the Bold" (Bobby Rose, Hollywood stunt man); "Egg Basket" (chicken industry in Petaluma, California); "26 Miles Out" (Farallon Islands); "Ship-Shaping" (overhauling a yacht); "Sixty Percent Have Jobs" (Federal Youth Survey); "King Cotton" (covering California's cotton industry, trade, pickers, and recent strike).

It's true, then, that magazines of almost every type, and more and more of each type, are using the picture essay technique. But it does not necessarily follow that every photographer who tries his hand at the new field will come in for his share of the increased amount of money that editors are spending for this type of material. It takes more than good photography to do a picture essay. It takes a fine sense of journalistic values, and the ability to ferret out information. The chances of a free-lance submission for acceptance are very low. With trade journals and house-organs, this type of material will practically never click when submitted without a preliminary query to the editor. And from available information, it would



"La Serfe"

Mario Vittone, Italy

22nd Los Angeles International Salon



"Magnolia"

Miss Ada Niggeler, Italy

22nd Los Angeles International Salon

appear that even *Life's* staff photographers have over half of their material rejected by the magazine they work for.

The photographic essay field is not one in which any editor would encourage a non-professional or a non-journalistic photographer to try his hand. Because such a huge amount of extra work is entailed in unearthing the complete information required for picture essays, rejection by a magazine is all the more heartbreaking and profitless.

The picture essay game is a tough one to crack—mighty tough. The best idea for a photographer who thinks he has a humdinger of a subject which he thinks might go well with the editorial slant of *Pic*, for instance, or *Coast*, or some trade journal, is to write or talk to the editor of the magazine, suggesting the subject. Do a real selling job on the proposed picture essay. Know enough about it in advance to tell the editor what he can expect. If you know what you're talking about, and your subject is an appropriate one for the magazine you are querying, and you can convince the editor of that fact, you'll get an order for the series. Then, the idea is to make a good job of it so that it will sell, and will pave the way for more orders.

The Preparation of Positive Transparencies For Projection

F. H. Thomas

DID you ever own a magic lantern? If not, you have missed one of the great joys of childhood. Now we have magic lanterns for our grown up days, the projectors which will enlarge the pictures we make with our miniature cameras on a viewing screen. To the uninitiated, these are real "magic" lanterns, allowing one to take a look at that favorite picture "blown up" to practically any size desired. Here is the real thrill of picture taking today, the first sight of our first color photograph projected to almost, if not actual life size!

Coming down to the more practical aspects of projection, we have here the most satisfactory method of showing our pictorial efforts to one person or a group of people, especially to the group, since one can show and talk about the picture to the entire assemblage at one time, something which can not be done when paper prints are the medium at hand.

Then too, the projection will show more detail than the paper print, this because the transparency being viewed by transmitted light rather than reflected light will bring out all the detail. If you doubt that this is true, take any of your paper prints and view them with the light coming through the back and note the detail present that is unseen by reflected light. The larger size of the projection also aids in bringing out detail.

Black and white projections are much more satisfactory than paper prints, but color projections from Kodachromes are marvelous to behold when the exposures have been correct.

Processing of black and white for projection is relatively simple and absolutely certain if one has at hand a few pieces of apparatus which may

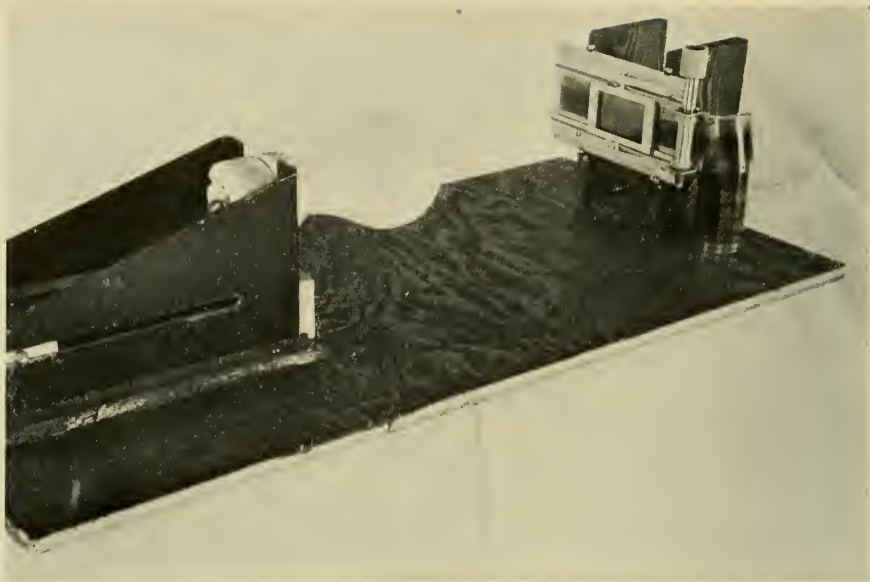


Figure 1

be either purchased or made in the basement workshop. The author's experience with the making of transparencies for projection has resulted in the evolving of a method which he believes is worth passing on to others.

The camera used is immaterial since what follows will be applicable to all miniature work which is capable of being printed on the film used in the modern miniature projectors. It is also equally useful for the making of two by two glass slides if one prefers to work with this type of positive.

The negatives can well be any that are printable, but as in the case of paper printing the normal negative will produce the best results unless one is looking for special effects. The writer prefers a negative which has had normal exposure and normal development in any standard fine grain developer. Such a negative will provide full detail and makes an excellent transparency. A fine grain developer is used because one will also make paper enlargements from his negatives.

Starting with our negative the first step in the process is the obtaining of a density factor for use in determining the printing time. This is vital because each print must receive an exact exposure to compensate for varying negative densities and make each positive a duplicate of every other positive in density. It is also necessary because our only controls will be time and temperature in the development of the positive strip.

To get this factor, the apparatus shown in figure 1 is used. This consists of a base on which are mounted two brackets, one carrying an adjustable light source and the other an opening in which the negative can be mounted and behind which a photo-electric cell can be placed. The light used is a fifty watt frosted globe. The film holder is the film gate from the

STRIP #37.		
Neg. no.	Density factor	Exposure time (from chart)
1	16	12
2	10	17
3	18	11
4	25	9
5	13	15
6	32	8
7	16	12
8	5	30
/	/	/
35	7	22
36	3	46

Fig. 2
Data record. Filed
with negative strip.

author's projector. A General Electric light meter is used behind the film opening. Any method of holding the film can be used as long as it prevents any light but that coming through the negative from falling on the light cell. The light cell may be as above, or one can use any of the photo-electric exposure meters. The new G.E. meter embodies their standard 75 foot candle meter and is ideally suited to measurement of negative densities.

In use the meter is placed in the apparatus without any film in the opening and the light source is adjusted until the meter shows full scale reading. Then the films are placed in the opening one at a time. The meter will read the light transmitted and these readings, or density factors, should be copied on a sheet of paper ruled into vertical columns. (See Fig. 2.)

To keep the record straight, one should give some identifying number to each film strip and, if necessary, to each reading to tie it up with the proper negative. The numbers on the edge of the film can be used or one can do as the author does, simply mark a strip number on one end of each film strip and start the readings and record them in order from the numbered end.

When the readings are completed one has a column of figures which represent the relative light transmitting value of each negative. Print exposure will vary inversely to this amount of light transmittal, so it is now only necessary to find the proper exposure for any negative on the strip and by simple proportion he may determine the proper exposure for all pictures on not only this, but any other strips which have been put through the process.

In order to determine this exposure it is necessary to make tests on two negatives, one normal, and the other the thinnest from which we expect to make a print.

For the printing, one will need a printer of some kind. This can be



Figure 3

purchased or one may make his own. The author uses the Eldia printer as made by the Leitz Company. Load the printer with a short length of positive stock and place in the opening the normal negative. Then, determine a standard time which you wish to use. The author uses a loud ticking alarm clock and counts sixteen ticks for this test. This will be four seconds on a second timer. Adjust the light source and make an exposure. Advance the positive stock, change the light source a predetermined amount and make another exposure at the same exposure time. Repeat this until you have eight or ten exposures which differ from each other by some regular amount. Develop this strip under the regular time and temperature method you will use for final prints. Fix, dry, and project this strip. From this, projecting to the normal size you anticipate using, you can select a print which shows the density you like best. This will then give you the standard light source for all future exposures.

For his standard light source the author uses his enlarger (see Fig. 3) with a 25 watt light in the housing, no lens, and a sheet of thin note paper in the opening to further cut down the light intensity. With this it has been found that about eleven inches from film gate to negative is about right. It took several attempts to arrive at this. Two test strips were burned to a dead black before the approximately correct intensity was reached, so do not become discouraged if your first attempt gives you a piece of either clear or dead black film.

Reset your light to the standard thus obtained and place in the printer another strip of positive stock and the thin film. Make another set of

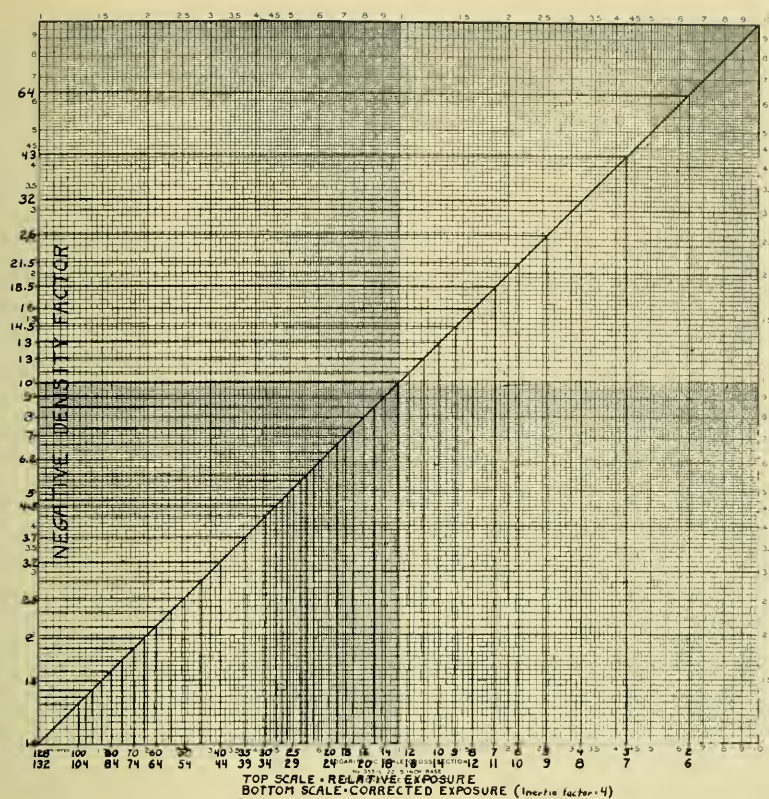


Figure 4

exposures at from two to ten ticks of the clock advancing only one clock tick at a time. Process the strip and project. One of these will be found to have correct density for the negative used but it will be found by referring to the relative density factors that these two exposures are not in the same proportion. This is because the positive stock has an inertia factor which must be determined before we can make out our final exposure chart.

This inertia factor is obtained from the two exposures we have determined as correct for the normal and the thin negatives. By referring to the density table we find that the normal negative has a density factor of say 11 and the thin one a density factor of say 63. Theory tells us that the relative exposures should be in the ratio of 11 to 63. Actually we find that the normal negative takes an exposure of 16 and the thin negative one of 6. The relative exposure being about six to one it is only necessary that we subtract an equal amount from each of the actual exposures until we arrive at remainders which have a ratio of six to one. Taking four from each we have left 12 and 2 which meet our needs. This number four then is our inertia factor and must be added to each relative exposure figure to arrive at the actual exposure.

Now, to get this information into usable form, it is necessary to prepare a table of inverse proportions, or better, get a sheet of log-log cross section paper and prepare a chart as shown in Fig. 4. Double scale paper is used

as shown. The vertical scale is used "as is" to indicate relative densities as read from the light meter. Two scales are prepared on the horizontal, one the relative exposure scale and the other the actual exposure scale which is obtained by simply adding the inertia factor to each of the relative scale readings.

To prepare the exposure scale it is only necessary to locate the point which represents the exposure for our normal negative. The amount is twelve as we found above and it is placed where a vertical line drawn from it to the 45 degree line will meet a horizontal line drawn from the relative density number for the same negative or 11. We can now fill in the remainder of the exposure scale by using the printed paper scale and keeping our figures in the same proportion.

The actual exposure scale is then filled in as shown. This scale is used for our positive printing and the other serves as a base for other usage as for enlarging.

Now to go to work. The first strip is placed in the printer which has been loaded with about six feet of positive stock. The density reading is taken from the original sheet and from our curve the exposure is read. The exposure is then made, the positive stock advanced, the next negative placed in the opening and the process repeated. When the strip has been finished the positive strip is removed and processed and then projected as a final check to see that nothing has gone amiss.

The proof being right, we are all set to finish the remainder of our pictures. And if the thrill of seeing your pictures really blown up to photo mural size does not equal the greatest thrill of your picture taking career, it will be only because you have experienced something which most of us have not.

Now for a few details which the beginner in any process wants to know. Any positive stock will make good prints, but the writer has found DuPont plain positive on safety base most satisfactory for his taste, up to the present time. Eastman film gives softer effects than DuPont. Develop in any good positive formula. That recommended by the manufacturer of the film you use may be best. The author uses D-11 full strength. Some prefer to dilute it to give softer tones. Do your own experimenting and find what suits you best. We do not all like the same thing.

Two positive strips may be processed at the same time. This film has no back coating to interfere so if they are placed in the tank back to back you can save considerable time. Leave about six inches of leader and trailer on each strip to facilitate use in the projector unless you intend to cut the strip and mount the pictures in glass slides. This is the proper method of projecting color film since there is no easy means of obtaining duplicates as there is for black and whites, and the film is sure to be scratched sooner or later in handling, or in the projector.

At the present writing there is a choice of several projectors. The Eastman Projector will handle only glass slides. This machine was developed with the idea that it would be used primarily for color projection. For the purpose it is an excellent machine. Then, there is the projector put



"Wind Driven"

Harrison N. Mucher, Reading, Pa.

22nd Los Angeles International Salon

out by The Society for Visual Education which is an excellent buy in a lower power projector. The same is true of the Argus machine. These will handle either film or glass slides. Finally there is the Leitz projector line in which there are several models. The Leitz projector has separate gates for film or glass slides which interchange in a few seconds. The writer has used two of these projectors over a period of three or four years and has found them excellent in every respect. For color work especially the fact that they do not heat up the film or slide excessively regardless of how long it's left in the opening is an advantage.

Finally, if you "load your own" you will appreciate the very low cost of prints ready for projection. Negatives cost about $\frac{1}{2}\phi$ each, positives cost about 2ϕ , processing about enough to total 1ϕ each. If you buy cartridge negative, this will cost around a total of 3ϕ per print. Photo murals at three cents each! Who would not be interested? And last but far from least are the full color murals at about eleven or twelve cents when you get the twenty-two pictures on your roll of Kodachrome that are possible with careful manipulation.

Cinema Section

Edited by

William A. Palmer

The Advanced Worker Controls His Movies

THERE is a fundamental difference in the way most still and movie amateurs handle the "esthetic" side of their hobbies. The still worker usually intends to exercise some control in making his final print so that the result is somewhat altered from the scene on the ground glass. He will either trim the picture to use only a portion of the negative, or "dodge" and shade the enlargement to emphasize certain factors and subdue others, or he may diffuse the enlargement or use a texture screen.

The movie worker, however, when he wishes to achieve an effect slightly different from straight photography must think of the effect and perform his manipulations at the time of exposure, for usually after the roll of film has been exposed, there is nothing that can be done to alter the composition or change the tone values of one portion of a scene over another. (In Hollywood such things are done but they require a fancy machine known as an optical printer.)

Three typical manipulations that are practised by still workers after the negative has been exposed and developed are:

1. Enlarging a portion of a negative to fill the normal size and shape of the picture.
2. Trimming the print to alter composition and place the center of interest in a more favorable position with respect to the other elements in the picture.
3. Control during enlarging such as "dodging," diffusion, and distortion.

These manipulations, which are done on stills as after treatments, have a counterpart in movies and when indulged in, will make movie making much more interesting. The fact that most of the effects available to the amateur must be accomplished at the time the pictures are made, is just one of many reasons why good movies require planning. Movies can be controlled at the time the exposures are made by:

1. Use of telephoto and wide angle lenses in place of the regular lens. This is comparable to the operation of enlarging portions of a still negative.
2. Variation of camera angles and position of camera. This is the nearest that movies can come to the ease with which stills can be altered in

composition by the simple matter of trimming. The still worker can take a picture with little thought and planning and later find a good composition in some portion of the negative. The movie worker must figure his composition ahead of time or just trust to blind luck.

3. Use of a matte box and mattes placed in front of or behind the lens. This is comparable to the various types of enlarging control that the still worker uses, and to a certain extent similar effects can be achieved.

Matte Boxes and Their Use

A matte box is simply a large sunshade, attached to the lens of the camera, and having guides at its outer edge to hold the mattes, which are usually rectangles of cardboard or sheet metal with apertures cut in them. Almost any lens shade can be used as a matte box by attaching the mattes to the front by means of adhesive tape, but to be really effective as a matte box, the lens shade should be at least two inches long. The rectangular filter holder and lens shade combinations that are on the market serve very well for holding mattes, or one can make a matte box easily by attaching an ordinary 2-inch square filter holder to the end of a piece of mailing tube which in turn is fitted by a bushing to the lens barrel.

The matte box is a device to hold mattes or masks at a little distance in front of the lens and thereby control certain parts of the image on the film. Mattes can also be placed behind the lens, immediately in front of the film, in cameras like the Cine Special and the Filmo 70 D equipped with a mask slot. The general principle of the use of mattes is the same whether they are placed in front of or behind the lens with the exception that the shape of the matte will appear sharper on the film when placed behind the lens. Fortunately for those of us who don't have cameras with a matte slot, the placing of them in front of the lens gives just as fine results, for usually the edge of the matte looks best when it is quite fuzzy. Let us now describe a number of effects that can be made in a matte box.

Vignettes

A vignette is the fading or darkening of a scene toward the edges and corners, giving more emphasis on the central portion of the frame. It is made by a matte having a rectangular opening with well rounded corners. The matte can be made with a $\frac{3}{4}$ -inch high by 1-inch wide opening and placed $2\frac{7}{8}$ inches in front of the regular lens (1 inch focal length on 16 mm. cameras or 12.5 mm. focal length on 8 mm. cameras). A matte of this size and shape will encroach slightly on the field of the lens, but being so close to the lens, will be out of focus. The result is a gradual falling off of illumination on the edges of the frame. In placing the rectangular matte in front of the lens, care must be exercised that it is centered accurately.

Vignettes of special shapes are often useful and can be easily made. Such shapes as keyholes, binocular field, ovals, and circles can also be cut out of opaque cardboard and held in front of the lens. It is important, of course, to have the size of the openings correct for the distance from the lens. The further away from the lens the matte is held, the larger must be the opening. The relation between the size of the matte opening and the distance from the lens is as follows:

*For the 1 inch (25 mm.) lens on 16 mm. cameras
or 12.5 mm. lens on 8 mm. cameras*

Maximum width of opening in matte = distance from lens X .35

Maximum height of opening in matte = distance from lens X .26

As an example, if the matte were to be placed 3 inches from the lens, the width would be $3 \times .35$ or 1.05 inches and the height would be $3 \times .26$ or .78 inches. Note that these are maximum openings for a rectangular matte. Special shaped mattes should come well within these limits.

The use for special shapes such as keyholes and binocular fields are quite obvious and such scenes should be cut into the middle of other scenes showing who is doing the looking.

Diffusion and Fog Effects

A very important use of the matte box is for holding mattes to diffuse or soften the tonal values in the scene. Such effects are used in Hollywood productions on almost all closeups and serve to smooth out make-up imperfections. Diffusion should never be so great as to give a fuzzy or out of focus effect; the detail in the scene should be good but there should be a blending of highlights and shadows.

There are many things that can be used for diffusion. A complete set of filters with varying degrees of diffusion can be purchased from the George H. Scheibe Co., 1927 West 78th St., Los Angeles, Calif. Harrison & Harrison, 8351 Santa Monica Blvd., Hollywood, Calif., also supply effect filters of various kinds. It is also possible to use many common materials to get good diffusion effects. One of the simplest is a sheet of clear cellophane which has been crumpled and then smoothed out again. This will give a mild amount of diffusion and should be used fairly close to the lens, perhaps an inch away. Various kinds of loosely woven cloth such as scrim, cheesecloth, and bolting silk are also good diffusers. The effect obtained with white cloth is different from that obtained with black. The white materials give more of a fog effect while black merely softens the image.

Frequently in professional work, cloth is used to give edge diffusion only, leaving the center of the frame sharp. This is accomplished by covering the end of the matte box with scrim, bolting silk or other material and then cutting or burning a round hole in the center. An effect known as a white iris is obtained by the use of a sheet of frosted celluloid in which a hole has been cut. With this effect, the edge of the image becomes completely softened to a uniform tone. Close meshed cloths in white like bolting silk give a very convincing fog effect by causing a light veil to cover the scene.

An approximate idea of the effect that any material will give, when used in the matte box, can be obtained by holding it up to the eye, but the exact result can only be established by a test.

Selective Filtering

The matte box can be used to hold color filters at its outer end and thereby give selective filtering to certain parts of the scene. The filters used for this can be cut out of gelatin to suit the special case. The most common selective filter is the sky filter which affects only the upper portion of the frame. Sky filters are commonly put directly over the lens where they have little or no selective effect, but an inch or two away from the lens is the proper place for them. A regular sky filter, half yellow and half clear glass, can be placed in the matte box with the yellow portion at the top, or a piece of filter gelatin of the proper type can be affixed to cover the upper portion of the scene, leaving the bottom unaffected (For the benefit of those who are not familiar with gelatin filters let them be informed that all the regular Wratten filters can be purchased in gelatin form

quite cheaply. In gelatin they work as well if not better than in expensive glass mounting, but they are naturally very delicate and easily spoiled in handling.)

A spotlight effect can be achieved by cutting a hole in a sheet of yellow gelatin. Filter gelatin is not necessary and ordinary cellophane or theatrical lighting gelatin can be used. The scene will have normal density in the center but much greater density around the edges. If the gelatin is placed further from the lens, say five inches, there will be a sharper division between the filtered and clear portions and a more pronounced spotlight effect. Likewise the smaller the lens diaphragm opening used, the sharper will be the edge of the matte. (This of course is true with all matte box effects.)

A very authentic night effect made in daylight can be obtained by selective filtering. The system is to filter the upper portion of the scene with a red filter to make the sky almost black and use a fairly heavy yellow filter for the bottom and foreground. A good combination is an A filter for sky and a G for the foreground. Such a filter can be purchased ready-made from the Scheibe Co. mentioned above. In selective filtering of this sort the dividing line between the two filters should not show on the film too sharply, so therefore the lens should be used at a large opening or the filter should be within an inch of the lens.

Distortion Effects

There are occasions when it is useful for dramatic or comedy effects, to distort the image seen by the lens. There are devices on the market which do this (the "lens modifier" and "duplicator," both made by Bell and Howell) but there are also many improvised gadgets that will give effects even more startling.

A piece of very low grade window glass held a few inches in front of the lens and at an angle so that the light rays pass through obliquely, then gently moved while a scene is photographed, will make the scene appear to be photographed through water. The more acute the angle at which the glass is held, the more the striations and imperfections in the glass will affect the scene.

Mirrors can be used to perform a great many tricks. The old kaleidoscope effect is made by cutting three strips of mirror, each one inch wide by four inches long. They are then bound together with adhesive tape, mirror side inward, to form a triangular tube four inches long through which the camera lens can shoot. Rotating the tube as the scene is shot gives an amazing effect. A single mirror about four inches square can be made to give the effect of reflection in water by mounting it horizontally, mirror side up, in front of the lens so that the edge of the mirror crosses the center of the lens. The lower half of the lens must then be covered up and the lens will "see" a somewhat blurred inverted image of the upper half of the scene, as though there were a body of water in the foreground. The mirror must, of course, be unframed.

Remarkable distortion effects and multiple images can be obtained by photographing through various odd shaped pieces of glass. Beverage glasses of all types are good subjects to experiment with. They can be held in front of the lens and turned to give a fine wobble to the scene. Cut glass pieces and such things as glass buttons with many flat faces at various angles will often give multiple images which can be made to move around as the glass is turned before the lens.

All of these distortion effects are useful at times to portray a condition of mind or lack of temperance, but they are most useful in making spectacular backgrounds for titles. A background consisting of some simple design with circles, triangles or other shapes, can be photographed through a moving dis-

tortion device and then the film rewound while the steady letters of the title are double exposed over the background.

These various optical distortion effects do not all require or use the matte box for their performance but since they are before-the-lens devices, they are in the same class as matte effects.

Multiple Exposures With a Matte Box

A matte box furnishes a very successful means of masking for double exposures in which one person appears in a dual role. By its use, a completely satisfactory scene can be made with any camera. The procedure is as follows:

The camera must be placed on a tripod and must not be moved through the entire procedure. The opening of the matte box is covered with a piece of black paper, fastened by a strip of adhesive tape across the top edge. Then a dividing line is cut in the paper. This may be a straight vertical cut or may be irregular, but since it is a cut in the paper already covering the lens' view both halves will match perfectly. One half of the paper, now cut in two, is turned up out of the way and the first exposure made while the actor goes through his motions in the section of the scene disclosed to the camera. The film is then wound back to the start. (With a camera not equipped to wind back, the lens can be completely covered, the film wound clear through to the end, the film removed and rewound in a darkroom, rethreaded and run to the start of the original exposure as shown by the footage meter.) The half of the mask that was turned up for the first exposure is then brought down and fixed, with adhesive, to exactly match the other half which is then turned up out of the way. Thereupon the actor takes his position on the other side of the set and the second exposure is made. If the camera and matte box have not been moved during the entire procedure and the camera movement is steady, there will be no evidence of the joining of the two mattes in the final scene.

Questions and Answers

Question: Which is the better lens equipment for all around use, the fixed focus or focussing mount

Answer: Many people, particularly beginners, like the fixed focus mounts because it relieves them of one adjustment to think about. The focussing mount, however, is much more versatile. An erroneous belief is that the fixed focus lens is a special type of lens that is sharp at all distances. Actually any lens with a focussing mount can be used as a fixed focus lens if the focussing scale is set at 25 feet and never touched. Since the focussing mount can either be used for extreme close-ups or set to give fixed focus performance, we would say that the focussing mount lens is the most desirable.

Question: Which is most useful as a second lens, a wide angle or a telephoto?

Answer: This depends somewhat on the type of filming that is to be done. Most amateurs who take their films in and around home and during vacation trips will find the wide angle lens the most useful. Persons primarily interested in sports will perhaps find better use for a telephoto.

Question: What is the best focal length for a telephoto lens.

Answer: The telephoto most often used is the three-inch for 16 mm. film and the 1½-inch for 8 mm. film. These give a three times magnification of the image and yet can be used if one is careful with a hand held camera although a tripod is advisable.



"Lily of Light"

Bob Smith, Chicago, Ill.

First Award Advanced Class

This is the sort of picture which the reader will either like very much or consider entirely meaningless, depending on his point of view. The judges approved of the picture, feeling that it showed a very fine feeling for form, considerable originality in conception, and was technically excellent. There is a standard phrase which is often used to condemn pictures of this sort, and those who use it frequently consider it pretty much of a tumbler. It goes, "Would you hang it on the wall of your home?" The persons who ask such questions of course are thinking of their own walls in their own homes and consequently assume that the answer must be no. For a picture like this would look incongruous on the walls of most homes. However it is not difficult to visualize a home created in the modern fashion into which this picture would fit very well indeed. So our answer to the question might well be, "Yes, provided I had the right kind of a home." It is plain that we are once again indulging a predilection which may be boring to our readers. We are pleading for a greater tolerance toward work which is different from the sort of thing we like to do. This plea is not made from a desire to defend any particular type of work—good work needs no defense. It is made because we believe that an open mind and a tolerant spirit make for progress.

Data: 5 x 7" Deardorff; 8" Schneider Xenar; 15 secs. at F:32, on Agfa Portrait Pan., minutes at 67° F. in DK-50; by one low spotlight with reflecting card; subject, photo-ood bulbs on black velvet; 11 x 14" print on Illustrators Special, in D-52, gold toned.

Second Award
Advanced Class



"Canyon At Sunset"
R. D. Kaufman,
Pasadena, Calif.

posite approach and select only relatively small bits which offer satisfactory arrangements, but such an approach can not give an impression of the canyon as a whole which is the objective in this case.

Data: 4 x 5" Graflex D; Defender X.F. Pan., in DK-50; 11 x 14" print on Defender Velour Black DL, in D-55.

■ This picture shows very successful handling of particularly difficult material. The tree form is beautifully related to the canyon beyond, and the lighting is well selected to make the whole thing most effective. We think that photographers are wise to adopt this sort of approach in photographing the Grand Canyon. The foreground material can then be used to provide the emphasis that is difficult to get in any extensive view of the canyon itself. Things like this bring out the characteristics of the canyon very well indeed. Of course one can adopt the op-

Third Award
Advanced Class



"Evening on the Thames"
Vlado Cizelji
Jugoslavia

concentrated on the main masses and on the atmospheric effect. Obviously either one or the other of the two treatments used here (1. back lighting, 2. foggy day) may give sufficient correction alone in many cases. The boats in the foreground perform two useful functions. They provide areas of dark tone which enhance aerial perspective, and they break up what would otherwise be a monotonous expanse of water.

Data: 4 x 4 cm. Rolleiflex; E. K. Panatomic film; 11½ x 15¼" print.

■ All of us occasionally find a subject which offers splendid picture material in its main lines and masses, but which is cluttered up with so much distracting detail that a satisfactory picture seems impossible. This print clearly illustrates two ways to wipe out unwanted detail. It is plain that under a strong frontal lighting the far shore would be so busy with detail that a shot from this angle would be worthless as a picture. However, when the exposure is made under back lighting and on a foggy day all of that unwanted detail is wiped out and the attention successfully

Fourth Award
Advanced Class

■ The lighting is very well handled here and there is just enough turn to the head and just enough tilt to the shoulders to give a nice feeling of movement. The most interesting point for discussion appears to be the depth of focus adopted. The reader will note that those planes of the face which are sharp, are very sharp, with the skin texture strongly brought out. At the same time the model's left ear and the outline of the face at the left of the print are definitely out of focus. Our feeling is that the transition is too abrupt, and that if we are to adopt such thoroughly sharp focus in one plane as is the case here that it would be better to maintain at least reasonably fine definition throughout. The tuft of hair which projects beyond the model's left ear should be touched out.

Data: 5 x 7" camera; orthochromatic film; 9½ x 12" print.



Sam Silverstein
Chicago, Ill.

Fifth Award
Advanced Class

■ We find this picture interesting as a rather extreme example of simplicity in subject matter. The material is made effective through nice spacing, back lighting and a superlative rendition of textures. Such simple things as this do not make "great" pictures of course, but it is well for the photographer to learn to fully appreciate the merits of pictures like this for doing so will help him to get away from a too great preoccupation with subject matter. Subject matter is important, of course, but what we are speaking of here is a rather wide-spread tendency to limit the subject matter of photography to pleasant things; to things which are beautiful in themselves in the narrower sense of that term. Approved types of subject matter for those who think in this fashion are handsome (but not ugly) people, especially "cute" children; lovely landscapes; genre studies lauding the homelier virtues. We are not deriding such pictures but simply trying to point out that if such limitations are accepted we must condemn a large part of the best work in all mediums. Photographers who wish to cultivate a well rounded understanding of photography as an art must learn to appreciate good work, regardless of subject matter.



"Cascade"
D. Kummer
Chicago, Ill.

Data: Super Ikonta B; 11 x 14" print on Defender Velour Black F.



"Windy Day"

Z. M. Qadri, Ahmedabad, India

First Award Amateur Class

■ Mr. Qadri has adopted very unusual print proportions for this picture, but they seem to be thoroughly justified. We often run across photographers who seem to feel that print proportions are a fixed and immutable thing. They fail to trim away a distracting item for fear that the picture will become too square or vice versa. Actually print proportions are completely flexible. It is far better to have a good composition within an unusual shape, than to place a poor one within the most ideal rectangle. The relation of height to breadth is a function of the composition and must of necessity be determined by it. If the composition is good the proportions of the print can be safely left to take care of themselves.

This picture is effective because the force of the wind is so strongly portrayed, and because the material is so nicely placed in the picture space. The question will naturally arise as to whether or not it would be of advantage to trim about one third of the total width off of the right side, and thus establish what might be considered normal print proportions. We feel that the picture loses something of its punch if this is done since the cloths at the right contribute much to the feeling of wind movement. We do wish that the cloths at the right were in as sharp focus as are the others.

Data: 1/50th sec. at F:8, on E. K. Panatomic, in M. Q.; medium yellow filter, cloudy day, 11 A. M.; 4 x 8" bromide print.

Cash Awards in 1939

In response to what appears to be the wishes of the majority, Camera Craft is now offering monthly cash awards for the first and second prizes in each class instead of the medals and merchandise orders heretofore given. The amounts will be \$10.00 and \$7.50 in the Advanced Class, \$7.50 and \$5.00 in the Amateur Class. A year's subscription will be given for the Third, Fourth and Fifth awards in each class. With the above exception the rules and conduct of these competitions remain unchanged.

Second Award

Amateur Class

■ We feel that Miss Hungate deserves much credit for the understanding way in which she has handled this subject. The large amount of space about the cats sets the psychological appeal of the picture most successfully. The cats are shown here in their relation to man—as tiny, graceful supplicants before the great house. It is plain that many photographers with less understanding would be tempted to trim in close to the cats, sacrificing the surrounding space as redundant. The cats themselves are so well posed that we would still have an interesting picture, but it would not be nearly as effective, original or well conceived as the present print.

Data: Leica Model F; 50 mm. lens; exposure by meter reading at F:12.5; E. K. Panatomic in Gamma D; $9\frac{1}{4} \times 12\frac{3}{4}$ " print on Defender Velour Black I, in D-64.



"Expectation"
Agnes M. Hungate,
New York, N. Y.

Third Award

Amateur Class

■ Perhaps the two qualities that are most important to all good portraiture are that the subject should appear thoroughly alive and natural. This picture possesses those qualities to a remarkable degree. The technical aspects of photography have something to do with obtaining these qualities in a print. The posing and lighting must be right or the spark of life will vanish from the picture. But the best technician, even the best artist in photography, can not make portraits like this unless he has the ability and understanding to get along with all types of people. For one's subject must be more or less at his ease, must have forgotten himself as well as the camera, before he will come alive on the print. Mr. Loeber has developed such a talent to a considerable degree as a series of fine portraits of this type testify. It is a talent which can be cultivated but it must be based upon a real and sympathetic interest in one's subjects as people, as well as material for the camera.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Popular Pressman; 7" Aldis F:3.4; 1/60th sec., at F:8 on E. K. Panatomic in special developer; 11 x 14" print on Defender Velour Black DL, in D-55.



"The Gay Pedro"
C. Stanton Loeber,
San Francisco, Calif.



"In Old Quebec"
Roland Beers,
Dallas, Texas

lem. We need to get rid of the material in the upper right and that can only be done by making a new shot with the carriage placed so that it does not project beyond the end of the building.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; 36 cm. (14.4") Schneider Tele-Xenar; $1/90$ th sec. at F:5.6 at 7:30 A. M. in November; E. K. Verichrome film pack; $10\frac{1}{2} \times 13\frac{1}{2}$ " print on Defender Velour Black I, in D-52.

Fourth Award
Amateur Class

■ This is a cleverly conceived picture. The old fashion carriage offers effective comment on the equally old style architecture. One could wish the carriage had been parked a few feet further along the street so that the shot could have been made without including the material in the upper right. This is not only distracting but it calls undue attention to the tilting of vertical lines. Notice that if we trim into the corner of the building this tilting becomes much less noticeable. Straightening things up by tilting the easel during enlarging is hardly the answer to this prob-



"Queen of the Desert Night"
Harold E. Hall,
Indianapolis, Ind.

out-of-focus leaf which projects into the picture at the right is unfortunate and should have been removed before making the exposure.

The print is mounted as if what is now the right edge were the base. It will be plain to all we are sure that the composition is quite unsatisfactory with the print viewed in such a position. We assume that this is simply a mistake in mounting and that the picture is intended to be seen as shown.

Data: Graflex Series B; F:4.5 Zeiss Tessar lens; 3 secs. at F:16, on Agfa Super Pan., in ABC Pyro; 11×14 " Chloro-Bromide print in Glycin.

Fifth Award
Amateur Class

■ This is a nicely seen flower study, and it is technically well executed. The highlight detail in the petal, however, is so delicate that we suspect that the reproduction will lose at least a part of it. Spacing of the blossom in the picture space might be improved slightly. The blossom inclines to the right and consequently the greater space beyond the blossoms should be to the right. As things are there is a bit more space on the left. We could trim away about half the space on the left beyond the tip of the petals, take a very little off the base and add a very little to the top. The

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Bob Smith, Sam Silverstein and D. Kummer, for the Fort Dearborn Camera Club; Vlado Cizelji, for the Fotoklub Zagreb; and R. D. Kaufman, for the Pack Rats.

The following won prizes for their clubs in the Amateur Class: C. Stanton Loeber, for the California Camera Club; Roland Beers, for the Dallas Pictorialists; and Harold E. Hall, for the Indianapolis Camera Club.

The following prize winners have no club affiliations: Z. M. Qadri and Agnes M. Hungate.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Indianapolis Camera Club (Ind.)
California Camera Club (San Francisco)	Knoxville Camera Club (Tenn.)
Camera Guild of Cleveland (Ohio)	Los Angeles Camera Club
Chat City Camera Club (Danbury, Conn.)	Marin Camera Club (Calif.)
Cleveland Camera Clique (Ohio)	Midwood Camera Club (Brooklyn, N. Y.)
Cleveland Photographic Society (Ohio)	The Pack Rats (Pasadena, Calif.)
Dallas Pictorialists (Texas)	Pictorial Camera Club of San Antonio (Texas)
Detroit Camera Club (Mich.)	Saginaw Camera Club (Mich.)
E.P.I.C. Pool of San Francisco	Sierra Camera Club (Sacramento, Calif.)
Fort Dearborn Camera Club	Toledo Camera Club (Ohio)
Fotoklub Zagreb (Yugoslavia)	U. C. Camera Club (Berkeley, Calif.)
Golden Empire Camera Club (Marysville, Calif.)	Vancouver Camera Club (B. C., Canada)

STANDING OF CLUBS

Large Clubs Advanced Class		Large Clubs Amateur Class	
Fort Dearborn Camera Club	8	California Camera Club	3
Indianapolis Camera Club	8	Indianapolis Camera Club	1
Pictorial Photographers of America	6		
Fotoklub Zagreb	3		
Small Clubs Advanced Class		Small Clubs Amateur Class	
The Pack Rats	4	E.P.I.C. Pool	4
Aluminum Camera Club	1	Dallas Pictorialists	2
		San Jose Camera Club	1

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Club Notes

The 22nd Annual Salon of the Camera Pictorialists of Los Angeles will be shown at the DeYoung Museum, San Francisco, from February 9th to 28th. This splendid exhibition, consisting of 360 photographs, was selected from more than 1,500 submitted by photographers throughout the world. Those who have enjoyed these shows in the past know they can expect a superb group of pictures. No photographer in the Bay Region can afford to miss this major photographic event.

The Photographic Society of America is making arrangements for a number of foreign shows to be exhibited in the United States in 1939. Arrangements have already been completed in France, Italy and New Zealand. These 100 Print Shows will be hung in representative cities throughout the country. The Society will return these courtesies by sending a special 100 Print Foreign Travel Salon abroad after a preliminary showing in New York.

Plans for a Continental Monthly Print Contest have been completed by the Photographic Society of America. Every club in North America or United States Territories is eligible to submit prints to the Regional Associations or Local Groupings designated by the Society. Winning prints will then be forwarded for judging by Geographical Sections. The winners in each of the six Geographical Sections will be awarded appropriate medals or certificates.

500 Cash Prizes have been offered in the First International Rollei Competition. Any picture made with Rollei-flex or Rolleicord Cameras is eligible for entry. There will be a \$200 First Prize and 499 other worthwhile awards. All prints must be enlarged to at least 5 x 5 inches but original color transparencies are equally acceptable. Closing date is August, 31, 1939, and entries from the United States and its possessions should be mailed to Burleigh Brooks, Inc., 127 West 42nd St., New York City. Complete details may also be obtained from

this address. Many of the winners will also have the honor of having their prints reproduced in a book which will be published and circulated throughout the world. The tentative title of this volume is "The Magic of Light."

The Miniature Camera Club of Maryland recently featured a different sort of subject matter in their monthly print contest. Members were asked to submit prints which were supposed to represent songs—ballads, modern swing, hymns, arias from operas, or nursery rhymes. Certainly this contest would test the ingenuity of any club membership and many interesting prints must have been submitted.

The U. C. Camera Club was recently organized on the University of California Campus at Berkeley, Calif. This flourishing group has 125 members and have already had an exhibition of 87 excellent photographs at the University Art Gallery. The club meets once each month and those interested may communicate with Myron Tribus, 2511 Channing Way, Berkeley, Calif. Phone: BErkeley 5654-J.

The Universal Camera Exhibit, a complete line of Leica Cameras and accessories, is now being shown in eastern cities. This exhibit is under the direction of Anton Baumann and all those who had the pleasure of attending his previous lecture and demonstration will be anxiously awaiting his next visit to their city. This exhibit will consist of working set-ups of Leica equipment and photographers are permitted to bring their own Leicas and try out the many accessories presented, as well as to see and hear lectures and demonstrations. See your local Leica dealer for the show's appearance date in your city.

A Retrospective Exhibition, 1905-1938, of Documentary Photographs by Lewis W. Hine, will be held at the Riverside Museum, 310 Riverside Drive, New York City. The exhibition opened Jan. 12th and will close Feb. 26th.

What Is Your Photographic I. Q. ?

The "True-False" quiz is an easy way to test your photographic knowledge. Read the statements as given below and check as you think necessary. Compare your results with the correct answers on page 96. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good 80%; good 70%; fair to bad below 70%.

1. Anhydrous sodium sulphite and desiccated sodium sulphite may be used interchangeably in a photographic formula.

☐ True ☐ False

2. When using Kodachrome, Type A, indoors with photoflood lights, as much daylight as possible should be allowed to enter the room to aid in making exposures.

☐ True ☐ False

3. A 16 mm. movie camera operating at normal speed takes 16 frames per second; an 8 mm. movie camera operating at normal speed takes 8 frames per second.

☐ True ☐ False

4. In the metric system 1 milligram is equal to 1,000 grams.

☐ True ☐ False

5. The equivalent focus of a lens is the distance from its optical center to the subject focused upon.

☐ True ☐ False

6. The safe number of regular photofloods which may be used on the average 15-ampere fused house circuit is five.

☐ True ☐ False

7. A subject three meters from a camera, in terms of feet, would be less than nine feet from the camera.

☐ True ☐ False

8. With a given subject, it is not necessary to increase the exposure time as the distance between the subject and the camera increase.

☐ True ☐ False

9. The walls of the ideal dark room should be painted black.

☐ True ☐ False

10. In photographing a landscape the best place to place the horizon is in the geometric center of the picture.

☐ True ☐ False

Notes and Comments

Stolen Cameras. Clarvoid roll film camera, Lens No. 748724; Royal Plate and Film Pack Camera, Lens No. 964077; Wirgin Watson Camera; Welta Perle Camera, Lens No. 343565; Foth Derby Camera, Lens No. 39035; V. P. Dolly #10644, Lens No. 206998; Bee Bee Palte and Film Pack #10260, Lens No. 300297; Supersport Dolly #8207; 35 mm. Dollina II #23615, Lens No. 1277844. Send any information regarding the above to Joseph A. Ossen, 710-18th St., Denver, Colo.

The Photrix SS Exposure Meter offers increased sensitivity and its range now extends from the brightest sunlight far into the field of indoor photography. See the new Photrix SS at your dealer's or write the Intercontinental Marketing Corporation, 8 West 40th St., New York City.

A twenty-four page pamphlet on the Leica Camera and accessories is now being

offered, without charge, by E. Leitz, Inc., 730 Fifth Ave., New York, N. Y. Ask for Pamphlet No. 7784. The booklet includes not only an explanation of the Leica's mechanism and accessories but also six fine full-page illustrations of photographs made with this camera.

The Hanksraft Automatic Timer is an ingenious new device manufactured by the Hanksraft Co., Madison, Wis. The Timer looks like the dial on your telephone and it works the same way. You dial the exposure time and your hands and eyes are free for dodging. Write the above address for complete details.

The "Lock-Sharp" is a light proof box for photographic paper. The cover drops into a light trap that eliminates any possibility of fog. Available only in 8 x 10 size at present, it will soon be offered in larger

sizes. Write R. P. Cargille, 118 Liberty St., New York City.

Unusual bargains are being offered by the Columbus Photo Supply, 146 Columbus Ave., New York City. Cameras, enlargers and other photographic equipment are presented at attractive prices. Write the above address and see their advertisement in the advertising section of this magazine.

An instruction folder for use with Champlin Formula 16 has been prepared by the Chemical Supply Co., Hollywood, Calif. The folder gives optimum development time for all popular films and contains a statistical graph of temperatures in relation to time ratios and is based on numerous experiments by Harry Champlin. Available at your dealer's or write direct to the Chemical Supply Co., Hollywood, Calif.

Burleigh Brooks, Inc., 127 W. 42nd St., New York City announces two new enlargers. For negatives 3x4 cm. and smaller, the **new Bee Bee Universal Rajah "O" Enlarger** offers many important features: a well-ventilated lamphouse with sturdy bulb mounting for retaining alignment for perfectly even illumination; single condensers with mount that insures correct position over negative; generous length, high-grade bellows; precision focusing with rack and pinion, guided by a metal bar; and an interchangeable lens board. The enlarger is supplied with a Parastigmat f:4.5, 60 mm. special enlarging lens and a universal negative carrier that uses either cut or roll film and sells complete for \$45.00. For 4x4 cm. or smaller negatives the **new Bee Bee Rajahfox "O" Autofocus Enlarger** is presented. The enlarger is automatically in focus for any picture size within its range of 2 to 9½ diameters. It is counterbalanced by a spring tape reel and operates quickly and smoothly. The mounted double condenser is matched to the lens supplied, which is a Parastigmat f:4.5, 60 mm. Completely equipped the enlarger sells for \$87.50. See these new enlargers at your dealer's or write Burleigh Brooks, Inc., at the above address for complete details.

The L. A. Camera Exchange, 1037 So. Olive St., Los Angeles, Calif., has recently expanded to include both 1035 and 1037 as addresses. The store carries an amazingly

complete line of photographic equipment and supplies, for instance, they have on display 24 different sizes and makes of enlargers. The new store is modern and spacious in design. There is a large library of photographic books and a 8-16 mm. film library available to patrons, as well as darkrooms, projectors and movie-editing equipment. Mr. Stinson (Micky) Ward and Mr. H. M. (Mac) Welch extend an invitation to all photographers to visit their store. Their monthly bargain bulletin "The Money-Saver" will be mailed upon request to those interested.

Prize winners of the Fifth Zeiss Ikon Annual Photographic Exhibition have just been announced by Carl Zeiss, Inc. Four thousand prints were submitted and three juries awarded eighteen prizes in three different classifications. First prizes of \$100 were awarded as follows: Pictorial Photography, C. D. Ryan; Press and Commercial Illustration, C. P. Regensburg; Scientific and Industrial, Grace F. Ramsey, Ph.D. In addition to the eighteen prize winners the juries selected eighty-two other prints for hanging and these one hundred prints with two hundred especially selected pictures will constitute the Fifth Zeiss Ikon Annual Photographic Exhibition. The Exhibition will be on view in the showrooms of Carl Zeiss, Inc., 485 Fifth Ave., New York City, during February and after that in various other cities throughout the country. Popular balloting will select the winner of an additional \$100 Grand Prize. When the show has completed its travels, 100 prints will be selected for loan to camera clubs.

Burleigh Brooks, Inc., of 127 W. 42nd St., New York City, having done 50% more business in 1938 than it did in 1937, distributed \$20,000 in cash bonuses to some thirty-odd employees this Christmas. Last year the firm distributed \$10,000 to its staff which then totalled twenty-five. Bonuses were determined by the length of service and amount of salary.

Six popular cameras have been reduced in price by Burleigh Brooks, Inc., 127 W. 42nd St., New York City. These reductions, effective January 3, 1939, were made on the following cameras: Certix, S. S. Dolly, Dollina, V. P. Dolly and Foth Derby. Bee Bee All-Metal Enlarging Easels have also been

considerably reduced in price. For a complete list of models and new prices see your local dealer or write the above address.

A new color photography processing service has been announced by Harrison C. Ryker, Inc., 1924 Franklin Street, Oakland, Calif. Any photographer may now make professional size color transparencies with the new large size Kodachrome, but many will find it inconvenient to install equipment for making separation negatives, matrices, and high-fidelity color prints. The Ryker organization makes densitometrically balanced separation negatives in all sizes from clients' color transparencies; and imbibition color prints in sizes limited only by the size of available matrix stock. Color prints are also made from client's own separation negatives made in the studio or in a one-shot camera. For use in half-tone and other reproduction methods, four-color separation negatives and positives on glass can be supplied. Prices are in all cases the lowest possible consistent with work of the highest quality, and it is believed that many professional photographers will find it cheaper to have their color processing done by the Ryker organization than to do it themselves.

A unique feature of the service is the unconditional guarantee that all delivered prints will faithfully reproduce the original. Full details will be mailed on request.

The new Wabash Exposure Guide for flash and flood photography will be sent free to every photographer writing the Wabash Photolamp Corp., Brooklyn, N. Y., manufacturers of Superflash and Superflood photolamps. This pocket guide seems to be the most complete ever published, and lists over 120 different films in 35 mm., cut film, roll and film pack, made by Agfa, Defender, DuPont, Eastman, Gevaert, Hammer, Ilford, Perutz, Univex, etc., together with data and exposure tables on their correct use in making flash and flood pictures. Complete data and exposure tables are also included with the various 8 mm. and 16 mm. films for home movies, as well as tables on Dufaycolor and Kodachrome films for color photography.

Halo is a new contact printing paper manufactured by the Haloid Co. of Rochester, N. Y. Halo is available in 6 grades of

contrast and it offers a blue black tone and full gradation scale. The new paper is said to maintain contrast with variations of exposure. Of importance is another property of Halo, the image first appears in development in about the same number of seconds, regardless of extreme over or under exposure. See your dealer or write the above address for full particulars.

Willoughbys, 110 West 32nd St., New York City, announce the publication of three new catalogues of interest to every photographer. A 63 page "Equipment and Accessories" Catalogue is profusely illustrated, and offers a wide selection of cases, tanks, enlargers, darkroom supplies, etc. A new "Photographic Supplies" Catalogue gives a complete listing of films, papers, and materials for the darkroom. A special supplement which accompanies this catalogue gives a list of prices and materials for the Carbro, Wash-off Relief and Chromatone color processes. A 16 page illustrated "Candid Camera" catalogue is also available. Write the above address for your copies which will be sent free of charge.

Mendelsohn Speedguns meet the new year with new 1939 models. Though they retain the proven principles of design that have made them so popular the new models offer valuable new features. Among these are: the adjustable aplanatic reflector which is easily shifted up and down the supporting leg so as to use the full lighting efficiency of any size bulb; a new improved bulb socket; and a battery case from which all wires have been removed so as to further reduce the possibility of failure. The new models are also offered at reduced prices due to the improvements in manufacturing technique and increased demand. See your dealer or write S. Mendelsohn, 202 E 44th St., New York City.

New catalogues on the Kine Exakta and Exakta Model B Cameras are now available. The catalogues give a complete description of these cameras, as well as the accessories available. A new Tripod Catalogue has also just come off the press and is ready for distribution. The catalogues will be sent free of charge to those interested. Write Photo Marketing Corporation, 10 West 33rd St., New York, N. Y.

Our Book Shelves

The Story Of A Face, by Hillary G. Bailey, F.R.P.S. Published by the Camera Craft Publishing Co., of San Francisco, Calif. 128 pages, 6¾ x 9½ inches, 96 illustrations, cloth bound, \$2.50.

Contrary to a possible implication of this book's title, this is not a romantic history of portraiture but a thoroughly practical treatise on the subject. In fact, we will go further and say that it is one of the most brilliant books on portraiture ever written and one that presents an entirely new approach to its subject matter.

As the author states, there are several excellent analytical treatises on the subject of portraiture and there is little of value that could be added by another book using the same approach. However, Mr. Bailey has long felt that a synthetical approach, one that considers portraiture as a functioning whole, based on certain fundamental principles, would offer the photographer a more useful, pliable tool than would a set group of rules.

We all know that our best made rules are forever collapsing before a new and unorthodox problem and, lacking a broad base of fundamental knowledge, we are unable to deal with the new situation or problem. Mr. Bailey proposes in his foreword to fulfill this lack and we can say that his book ably achieves its purpose.

Perhaps, to make Mr. Bailey's viewpoint completely clear, we should borrow his own explanation:

"Usually the most popular method of study is analytical. Could anything be more practical than to take a clock apart to see what makes it tick? In other words, to analyze it? Or what is more informative than to disassemble a motor to see what revolves the crank shaft? Unquestionably nothing, except that when the clock is taken apart and the motor disassembled (that is, analyzed) the former will not tick nor will the latter run until put back together again."

Thus "The Story Of A Face" considers portraiture as a functioning whole and it offers an amazingly clear explanation of its fundamental principles, enabling the

photographer to use his knowledge as a flexible, pliable tool with which he can discover the character of each of his subjects.

The book is brilliantly illustrated with some ninety-odd explanatory pictures and drawings. The graphic lessons these pictures offer are such that the point in question is fixed clearly in the student's mind and they continually accent the lessons of the text.

It seems superfluous to more than mention the author's name, Hillary G. Bailey, F.R.P.S., for it is one that is widely known and esteemed in all photographic circles but we can use this space to congratulate the author for the intelligence of conception and the skill with which his book was written.

ANSWERS TO "WHAT IS YOUR PHOTOGRAPHIC I. Q.?"

From Page 93

1. True. The terms anhydrous and desiccated are synonymous when applied to sodium sulphite; both terms indicate that the chemical is practically free of all moisture.

2. False. It is important that no daylight be permitted to enter the room when Kodachrome, Type A, film is used. Type A film is color-balanced for the ruddy light of photoflood lamps; as a result all objects touched with daylight will be colored a decided blue.

3. False. Regardless of the size of film, 35, 16, or 8 mm., all silent movie cameras at normal operating speed expose 16 frames per second.

4. False. 1 gram equals 1,000 milligrams.

5. False. The equivalent focus is the distance from the optical center of the lens to the ground glass when focused on a distant object.

6. True. Five regular sized photofloods are the maximum number of bulbs which may be placed on one circuit without having to contend with blown fuses. As a precaution, however, care should be taken that the circuit used is not already burdened with other electrical apparatus.

7. False. To be exact a meter is 3.37" longer than a yard; consequently a subject three meters from a camera would be 10.11" farther away from the camera than one at nine feet.

8. True. The brightness of the subject to be photographed is independent of the distance at which it is photographed. For example: A brightly illuminated figure at ten feet would require the same exposure as one photographed at twenty feet. Try it as an experiment.

9. False. Many readers undoubtedly checked this statement as being true considering that the writer has seen many dark rooms that have been painted black. However, it stands to reason that even though the dark room was painted white the reflected light of the safe light could not exceed the intensity of the original light source. Obviously if the safe light is "safe" there is no need to worry about its reflected light.

10. False. Heaven forbid! Never place your horizon in the center of your picture if you want favorable comment from someone who is pictorially minded. Generally speaking the horizon should fall about one-third from the top or bottom of the picture as the subject matter may demand.

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"Pensive"

Vincent Lopez, New York Sun

*New York Press Photographers Association
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We cannot in this limited space present the advanced technical features of the Devin Cameras. Write for free descriptive booklet illustrated above.

Cameras don't take pictures by themselves! It takes the artistic genius of Anton Bruehl to produce those superbly beautiful color photographs which have given him well-deserved fame, not only among the great national advertisers and magazine editors, but among the millions of their readers. This pioneer in color photography has run the gamut of color from the serene dignity of a classic still-life, to the crowded, teeming life of a musical comedy stage. He is truly a master of his art. But it is a supreme tribute to the superior qualities of the Devin Tricolor Camera that it *ALONE* is chosen by Anton Bruehl and by every other great American photographer. Theirs is not a random choice among uniformly good instruments. It is their unanimous choice of a camera that is so advanced in its design and features that it stands alone — at the top.

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"Yucca and Rocks," Mojave Desert, 1937

Edward Weston

Photographing California

Edward Weston

Part II

THE photographer who stays at home has one great advantage over the photographer who travels—his familiarity with his surroundings. He can study his material constantly, know how it looks at different times of day and seasons of year. He knows when the light is best in all of his favorite places, when the weather will be good, what kind of clouds to expect. For the photographer who travels no such careful study is possible. Each day brings new subject matter to view, each hour crowds on new impressions. He must be constantly alert so that nothing shall escape him from the earth at his feet to the distant horizon. Often there may be no more than a moment in which to decide whether some passing object is worth a negative or not.

My first year of photographing under a Guggenheim Fellowship was hard, concentrated work, and I am not sure that I could duplicate such an output (over twelve hundred 8 x 10 negatives) every year even if given the opportunity. Sometimes in the first months of desert travel I was on familiar ground, for I had worked on the Mojave before. But at the beginning of summer when heat precluded further desert work I left southern California, and most of the time for the next five months I was working in territory entirely new to me. I had thought I would find little to do in the mountain country because I felt its subject matter to be too confused and undefined compared with the stark and simplified forms of the desert. But the High Sierra and the northern Coast Range proved just as rich in

subject matter that appealed to me as the deserts had been. And of course new country meant new working conditions and more problems to be solved.

The first summer trip—the only pack trip of the year—was to Lake Ediza in the High Sierra. We pitched our tent at ten thousand feet and spent five days fighting off bloodthirsty mosquitos while I made over a hundred negatives of everything from the jagged black peaks of the Minarets to ice and snow floating on Iceberg Lake. Here the old problem of loading came up again, because of course there was no comfortable car to throw a tarpaulin over. Loading 8 x 10s in a changing bag is about as easy and practical as loading with your feet, and by the time the trip was over I had devised a better system. This was to set up a kind of tepee inside the tent at night, by extending the tripod legs full length and pinning blankets around them. Sitting inside this contraption to load may mean cramped quarters and mild suffocation, but to my mind anything is better than a changing bag.

I found a rocky point near the tent where I could set up my camera and have an unobstructed view to the horizon on every side. Since we had thunder storms nearly every afternoon this was an ideal place for photographing clouds, because I could work until the last minute before the rain began and be out again as soon as the shower passed our slope. While speaking of clouds I will bring up a question that is often put to me, namely, don't I find a stand camera a serious disadvantage when photographing clouds? The answer is no. And the reason is that the ability to conceive and execute a picture quickly depends a great deal more upon personal conditioning than it does upon the speed of your tools. From long practice I am able to work very rapidly with an 8 x 10 (more rapidly than many photographers I have seen struggling with small hand cameras and a welter of gadgets.) I had myself timed once, out of curiosity, to see how long it took me to set up my camera, focus on a cloud, and make an exposure. I found I could set up my tripod, get my camera out of its case and onto the tripod, decide on my composition, focus, check to see that screws were tightened and that neither bellows nor lens shade cut off, take a reading, decide on exposure, set the shutter, stop down the lens, get a holder from the case and put it in the camera, draw the slide and release the shutter, in two minutes and twenty seconds. With camera once set up I was able to focus on another cloud and make a new exposure in thirty seconds.

One thing that would make this type of camera a great deal more efficient for doing any moving subject matter is a wire view finder. In the short time that elapses between my last look at the ground glass and the release of the shutter, fast moving clouds change their position considerably. I take care of this by noting the direction of the clouds, and, depending on their velocity, allowing sometimes as much as half an inch at the side of the ground glass. Although I seldom fail this way a view finder would make it much safer.

The most difficult aspect of working in the High Sierra was getting around with my heavy equipment. Some of my best work that summer was done with the junipers at Tenaya Lake. These windblasted trees grew well up on the smooth granite cliffs that surround the lake, and climbing



"Dead Pines, Tenaya Lake 1937"

Edward Weston



"Iceberg Lake, High Sierra 1937"

Edward Weston

to them was difficult work. After my first day's work there, climbing up a steep wall of rock to make three negatives, I was prepared to give up. The equipment I carry in the field weighs about fifty pounds, and it was too dangerous to be balancing it along narrow ledges and up slopes of slippery glaciated granite. But after some reconnoitering we found an easier incline at a place where the car could be driven back to the base of the slope. From here I would start out before sunrise in the morning, with camera, six holders, and a pocket full of dried fruit, to make the ten or fifteen minute climb to the first junipers. Then for the rest of the day I would progress up and around the mountain from juniper to juniper according to the direction of the sun. At noon some lunch would be brought up to me, water, a sunhelmet, and the other six holders. By sunset I would come back to the car exhausted but usually with all films exposed.

About the middle of summer we set out to follow the coast from San Francisco to the Oregon border. The northern California coast is usually shrouded in fog in midsummer and this occasion was no exception. Coming from the strong contrasts and brilliant sunlight of the southern deserts, I found the muffled shoreline flat and uninteresting at first. But I soon realized that fog was as much a part of this country as sunlight of the desert. I came to like the dark trees and buildings against blank white skys and the rolling grey waves of fog that poured so dramatically down the hills. Much of my work there was done with the giant redwood stumps



"Eel River Ranch, 1937"

Edward Weston

that have washed down the rivers and been hurled up by the sea to lie on the long flat beaches where weathering gives them a beautiful silvery sheen. Often these great logs would lie right in the tide line and I would have to hurry to make an exposure before the incoming waves reached my tripod legs.

Because we had added several extra trips to our original northern California schedule it was already time for the rains to begin when we started out on the last and longest one. This was to make a grand circuit, up to the east side of the state, across the north end, and down the west side via the Redwood Highway. We got out of Lassen Park just ahead of a snow storm and proceeded north in a gentle but persistent rain. We were planning to follow the Klamath River out to the coast, and since that road was likely to be dangerous in the rain we pitched camp in the Modoc Lava Beds and settled down to wait for the rain to stop. Fate was working for me because the Klamath River road, when we finally did go over it, was not particularly exciting photographically; but by spending a week in the rain in the Modoc Lava Beds I got some really spectacular pictures that I never would have made under "favorable" conditions. Every morning we would pack food and camera into the car and start out cruising. Sometimes we would be in a dry center with storms all around us, and then I would get the camera out and work feverishly. At times I worked in the rain



"Rain Over Modoc Lava Beds, 1937"

Edward Weston

until my focussing cloth could be wrung out like a wet towel. Certainly a big umbrella would have been a welcome addition to my equipment then, as well as later in the winter when I was working in Yosemite Valley where snow melting off the trees would come cascading down on my camera.

When we arrived in the north coast redwood groves the rain began once more, but since it was a light one the high tree tops made a satisfactory roof and few drops ever reached the ground. I was fascinated with the jungle of undergrowth among the trees—fallen trunks and upended roots covered with moss and ferns and delicate little plants. There was no sunlight and no wind, and usually it was so dark in the groves that I couldn't even get a reading on the Weston Meter. Sometimes my exposures lasted ten minutes, but if a fern or leaf moved in that time it always went back to place and I had no worries about my results. What was my horror then on developing to find that at least a third of these negatives were moved. During the long exposures one of the tripod legs might have sunk a sixteenth of an inch in the soft turf—all that was needed to ruin the negative. Once or twice I had the same trouble working on the beaches when a tripod leg would sink in the sand. The best suggestion I have had for overcoming this difficulty is to put guards on the tripod legs like those used on ski poles. Another possible solution is to have a triangular piece of canvas with holes at varying distances from each corner: the tripod points can then be inserted in whichever holes are needed to hold the canvas taut and so brace the legs.



"Moonstone Beach, North Coast 1937"

Edward Weston

When I spoke of the necessity for speed in photographing clouds I used them as an obvious example. Actually I often have to work just as fast in photographing a landscape or a building or a tree. A current issue of *TIME* says "Weston's (work) mirrors static Nature." This is of course nonsense. Anyone who thinks nature static simply hasn't taken the trouble to look at it, certainly has never tried to photograph it. Too often the photographer sees his picture disappear before his eyes; the light shifts or the clouds break down and the picture is gone before he can release his shutter. Breaking waves, waving grass, bending trees, lengthening shadows, changing light, cows and horses that won't stand still (or won't go where you want them to), clouds that cover the sun just as you are ready to make an exposure—these are but a few of the active aspects of "static" nature that send the photographer to an early grave. The painter and the photo-painter may be said to have a kind of "static nature" to draw on, since they may store up fixed images in their heads for use in subsequent pictures. But the photographer deals only with the immediate present, and with only one moment of that present. For photography is a way to capture the moment—not just any moment, but the important one, the one moment out of all time when your subject is revealed to the fullest—that moment of perfection which comes once and is not repeated.

In the May issue Mr. Weston will write on "Light vs. Lighting," in June on "What Is Photographic Beauty," in August on "Portraiture."—Ed.

Original And Unique The P. and H. Process Of Negative Development

H. C. Benedict, Ph. D.

THE rules of scientific writing decree a strictly impersonal approach. I cannot be impersonal in this case. I am too enthusiastic. I feel like a herald and must pass on the good news, personally, as one would any good news.

I have had the good fortune to live near Mr. Frank Perry and so to have been among the first to whom his newly discovered developing process was disclosed. In his modest way he calls it the *P. and H. Process*. If I were merely to tell you the results, without evidence, you wouldn't believe me. I couldn't believe it myself until I had seen some of Mr. Perry's work and even then I rather attributed the marked improvements to his own superior technique. But now I have made some comparisons of my own and I know that there is nothing mysterious or hidden about it; although I must admit to a slight breathlessness. I had thought of emphasizing the originality and uniqueness of the process but I think it will be more to the point to let each of you judge for yourselves. Many other developing procedures have been published, and most of them either had no merit or involved some hocus-pocus or specious theory. (See my articles in *Camera Craft*, April, May and June, 1936.) Let me say at the start that Mr. Perry's process involves the simplest of theories, that it holds water on close examination, that it works, and that it is so simple in principle and practice that I have been kicking myself ever since I heard the details that I had not thought of it myself. So will you.

Mr. Perry is rightly cautious and makes few claims. Here is a list of some of the advantages of his process, as I have found them myself.

Adv. 1. Greatly improved shadow detail.

Adv. 2. Simultaneously improved highlight detail.

Adv. 3. Increased film speed (about twice).

Adv. 4. Increased latitude of exposure.

Adv. 5. Improved detail definition.

I think I should end that with the well known quotation from Ripley.

Let's look at the figures. All the illustrations were taken with a Graflex $3\frac{1}{4} \times 4\frac{1}{4}$ on Eastman Portrait Panchromatic film. The pairs of identically exposed negatives were divided into those which were developed in DK 20 to a gamma of 0.8, and those which were developed, without special equipment, by the P. and H. Process. Prints were made on Velox No. 2 developed in D 72. Contact prints were made, rather than projections, so that there could be no question as to whether or not dodging had been resorted to in certain areas. For the first two figures midafternoon sunlight was coming in through a large window, and a sheet was hung up to reflect a little light on the subject. No artificial light was used. Notice particularly the increased texture in the flowers and in the sunlight portion of the skirt in Figure 2. The next two (Figures 3 and 4) of the door way are practically self explanatory, although maybe I should say that in the negative which was developed in DK20 the inside of the hallway is almost clear film. No print showing more could be made. The last two (Figures 5 and 6) were taken with a combination of artificial and daylight. Two photofloods in reflectors were on one side of the face about three feet away, dull daylight on the other side. The improved separation of the hair and face from the background, as well as the greatly improved rendering of the eyes, is at once apparent. You judge whether or not these illustrations support advantages numbers 1, 2, and 5. For the increased film speed you would have to take my word anyway, because I could juggle the times to make it come out right if I wanted to, so I won't submit any examples. I have shot Agfa Super Pan Press, in tungsten light (not photofloods) with good results at a Weston rating of 160. Latitude of exposure, grain size, and other characteristics I will discuss in the next issue.

If you have read thus far and are not dying to know how it is done you must have a hypothyroid condition. The process is simplicity itself. You merely immerse the film in a cold concentrated developer for about a minute, squeegee the film, emulsion side down, to a plate of clean glass and submerge the combination in water at normal room temperature for 15 minutes to several hours. The time is not important. Fix, wash, dry. Isn't it simple? But the results—Ah, I had better not start on another panegyric, you have seen some of the results yourself.

Now you can understand why the advantages I mentioned above are not only plausible but possible. The film soaks up concentrated developer, but as it is cold, little or no development takes place. As any excess is removed by the squeegee, the highlights can only develop up so far and then they must stop due to the exhaustion of the developer and the accumulation of bromides. (Adv. 2) This allows time for the shadow detail



Fig. 1. Developed in DK-20.



Fig. 2. Developed by the P. & H. Process.

to develop up to a usable printing density, (Adv. 1.) and also doubtless explains the increased film speed. (Adv. 3.) Sensitometric strips have shown that the curve at the foot *and* shoulders of the H. and D. curve is very materially straightened, which confirms the above three observations and also helps explain the increased latitude. (Adv. 4.) The improved detail definition, (Adv. 5.) and grain reduction may be explained by saying that the gelatin never gets a chance to swell and allow minute distortions and grain clumping. I have no explanation for the little loss in contrast in spite of holding back the highlights and allowing the shadows to catch up. If you don't believe it, try it yourself. You probably want to.

First, I must emphasize that there is no way of processing roll film by this method without using some special equipment designed by Mr. Perry. I have tried. There is just enough curl in the roll film, even in cut lengths, so that each time you get it nicely squeegeed to the glass plate, it springs off—sometimes you can't even find it again in the dark. Even cut film will yield more uniform results with another piece of Perry designed apparatus. But if you must experiment with it first, and I can recommend it, here's how to P. and H. Process cut film with the usual dark room equipment.

It is possible to get good results with DK50 *replenisher* used undiluted, but Mr. Perry recommends the following:*

	Metric	Avoirdupois
Water.....	1 liter	20 ounces
Metol.....	10 grams	100 grains
Sodium Sulphite.....	60 grams	1 ounce 100 grains
Hydroquinone.....	20 grams	200 grains
Kodalk.....	80 grams	1 ounce 300 grains
Potassium thiocyanate		
(sulphocyanate).....	4 to 8 grams	40 to 80 grains
Water to make.....	2 liters	40 ounces

Use undiluted.

*Curiosity prompted a comparison which revealed that Mr. Perry's developer is DK50 replenisher to which he has added potassium thiocyanate.



Fig. 3. Developed in DK-20.



Fig. 4. Developed by the P. & H. Process.

The formula given on the facing page is one of a series of experimental formulas made up for testing purposes. Latest experience indicates that the quantity of Potassium Thiocyanate should be reduced to 1 gram per liter, (10 grains per 40 ounces). Immersion time in the developer will vary somewhat depending upon the absorption characteristics of the film—Ed.

The illustrations were made with this developer. The developer must be about 55° F. (Much warmer will start development too soon, much colder will crystallize out some of the ingredients.) Films are immersed on hangers or clips for 60 seconds (the fingers should not touch the film as their warmth may start irregular development), turned face down on a sheet of clean, but not necessarily dry, glass and squeegeed into close contact with a *soft* rubber squeegee. (A hard squeegee does not seem to get the negative in as close contact as a soft one, and causes irregular development. Either roller or blade type squeegee may be used.) The plates with their adhering films are placed in a tray or tank of water at about 70° F. to allow the development to proceed. The water maintains the temperature, and prevents air oxidation of the developer on the back of the film. Then you can get a bite to eat, go to a movie, or even go to bed, because the time and even the temperature are not important at this stage. I have left them in the water for from 15 minutes to two hours. I am told that up to 24 hours



Fig. 5. Developed in DK-20.



Fig. 6. Developed by the P. & H. Process.

shows no change. Mr. Perry has used temperatures up to 120° F.—no, I did NOT misplace a decimal point. I have found a tendency for the film to stick or come off with difficulty at the higher temperatures, but I can vouch for one thing, there is *no* reticulation. It is said that in transferring the film to the fixing bath the lights may be turned on, as the developer is now exhausted. I have used an OA safelight and found no light fog. The films are fixed and washed in the usual manner.

A few precautions I have not mentioned are: Finger prints on the glass increase the tendency to stick, particularly at the higher temperatures. New glass may produce a peculiar iridescent coating on the film which, however, does not seem to affect the final print. This can be avoided by putting the glass in the developer for a while and then into the fixing bath followed by a final washing. Don't try it on roll film and remember that even with cut film, more consistent and rapid results can be obtained with apparatus designed for the process.

That is all there is to it. Try it. I dare you not to be enthusiastic.

Another article on use of the P. and H. equipment with particular emphasis on the results to be obtained with roll film will appear in the next issue.

It would take a host of articles, however, to adequately cover the many ramifications of this process and to provide all the factual data which should be available if the process is to be fully understood and utilized. Camera Craft is therefore proud to announce that Mr. Perry is now working on a book which will describe his process and its many applications in full and complete detail. Publication date will be announced shortly.—Ed.

Time Out For Planning

Bert B. Kopperl, Jr.

WHY is planning so necessary to the success of good photography? Any form of art or creative work cannot be accomplished well in a haphazard way. In photography the artist, or craftsman, not only has to concern himself with technical data and operations in order to record and put on paper his subject, but he also has to concentrate on a technique, which will distinguish his work from the work of others.

Technique should not be forced, as straining for an effect does not produce sincere art work. On the other hand, technique cannot be expressed without previous consideration or constructive planning.

First the craftsman must ask himself what his main reason is for taking this particular picture, or group of pictures. Is it to express an original idea, a special lighting effect, to interpret an emotion, to instill a feeling of symmetrical motion, or just to capture the sheer beauty of the subject? In others words he must decide before hand what sort of a title will represent his finished photograph. There should always be a reason for taking a subject. Naturally if there is no tangible reason discovered before "snapping," the finished picture will be doubtful in its purpose.

When the reason is firmly in mind a suitable scene or person must be determined. If a particular person brought about the main idea, the treatment of this subject must be considered as to dress, accessories, posture, and expression.

The problem of composition now sets in. The photographer asks himself: What should I use for a background? Do I want to include that tree? Am I cutting too close to the edge of the house? I wonder if it would be better to "shoot" from below to give the subject height, or would the picture be more striking if I were to get up on that small hill?

It shouldn't be difficult to visualize what a picture will look like from a given angle without peering through the camera every second. It is sometimes best to decide before hand just what should be included in the photograph to get the best results, instead of composing it according to the way it looks in the ground glass or finder.

Lighting and composition go hand in hand. Often the lighting gives the key note to the composition, as for instance: If you were taking a picture in a forest with rays of sunlight streaming through the trees in symmetrical patterns, your first impression would undoubtedly be to compose your picture according to the sun rays, and let the trees be incidental in the composition, that is provided that nothing objectionable was in the foreground. Even then there are ways to overcome these obstacles by a slight change of the camera angle. More often, however, lighting should be predetermined to get the best results. It may require waiting on a certain spot for hours to watch the effects caused by the sun in order to get a perfect picture. In interior work the subject's pose, or the furniture arrangement in a room, along with the camera angle, should be decided upon before the lights are placed around.

When these fundamental points are planned carefully, you are ready to apply your own individual style or technique. In many cases it will be instinctive, and in others you may come up against problems. Technique is not something you, yourself, can put your finger on, but, when the prints are viewed by others, listen and observe their criticisms, whether they be laymen or professionals. Note if your original purpose has been put across. On occasions a viewer will observe a creative touch, which you had overlooked, or at least you took for granted when photographing. If these criticisms are stored in your mind, you will apply them again and again instinctively until they become your style. You cannot rely on your instinct, however, to put over the main idea behind the picture. The artistic touches are to aid you in putting the idea across, not to be made to carry the whole burden of making the picture a success by forcing.

The illustrations show five of a series of photographs that I took while visiting Mexico last Spring. My purpose in taking this series was to show how the Mexican made bricks for his house, where he might take his "siesta," how a miner lives, his occupations, and what he looks like, and many other ideas, which I thought interesting. I shall endeavor to show what went on in my mind during the moments of planning before taking these five pictures.

Figure 1 is a photograph of a "peon" making adobe bricks for his house. First of all I said, "what are the processes of making these bricks?" Secondly, "can I get the whole story in one photograph to let the picture speak for itself?"

I found a small mound nearby that afforded a general view of the subject, but at that time of day only backlighting from the sun was available. In this particular incident I deemed it best not to wait for another day, as the shadow patterns caused by the man and bricks were quite striking and would aid the composition. In poor Spanish I managed to get the Mexican in a comfortable position and had him rake his mud. The sun was quite strong so a fast shutter speed was possible, along with a small diaphragm opening. In this way I could catch him in a natural position. That was all the consideration I gave this "shot" other than the usual camera technicalities. I did not alter the "props" in the least.

Figure 2 is of four "hombres" taking their Sunday "siesta" on a hilltop. I had three main reasons for forming this composition. One, to



Figure 1

portray the heights of the men and trees by comparison. In this way an idea of the surrounding country can be given. Two, to make the trees and men stand off against the wide expanse of sky by placing the camera at the foot of the hill. This gave a plain, uncomplicated background that wouldn't detract from my subjects and give the feeling of peace and quiet at "siesta" time. Third, to bring out the texture of the tree bark and the shadows thereon, which seemed to give roundness and sense of realism to the trees. Realism is a main factor and purpose of modern photography.

I posed the subjects by waving at each individual man separately. They were rising and sitting and rising again like jacks-in-the-box. Finally I got the right ones to sit and stand. A yellow K2 filter was used to darken the sky.



Figure 2



Figure 3

My purpose in taking figure 5 was to show how the miners live. Some of their houses were finished and others were under construction. Again I turned towards the nearest hill and placed the camera *behind* three shaded trees instead of in front of them. Dark objects in the foreground or semi-foreground create an illusion of depth. It is similar to peering through the window of a darkly lighted room at a brilliantly lighted scene outside. The contrast of tones form this optical illusion.

The workmen in figure 3 are hewing boards for the houses from large pieces of pine timber. One man stands on top of the timber on one end of the saw, while the other man operates the saw from the ground. The main problem here was the camera angle, the second was depth of focus, the third to get the feeling of motion and activity without the possibility of a blur, and fourth the lighting.

I placed the camera as low as possible on my tripod so as to include a part of the man in the foreground, but under normal circumstances the man on top of the timber has to stand much farther down to operate his saw quickly and efficiently, therefore the selected position within the camera's range was taken. I used the swinging back of my 4x5 view camera to aid the depth of focus problem, but it was not sufficient. This excluded the possibility of stopping action and necessitated a diaphragm opening of f:22. Satisfactory depth of focus resulted. When viewing the heavy shadow across the face of the man above, I was puzzled. I reasoned that the saw and timber were the important reasons for the picture, and that the faces were subordinate, and that this lighting would draw the attention to the desired spot. The removal of the Mexican's hat would have added more light to his face, but quite often subordinate objects should be kept in their proper place by either darkening them, or by putting them out of



Figure 4

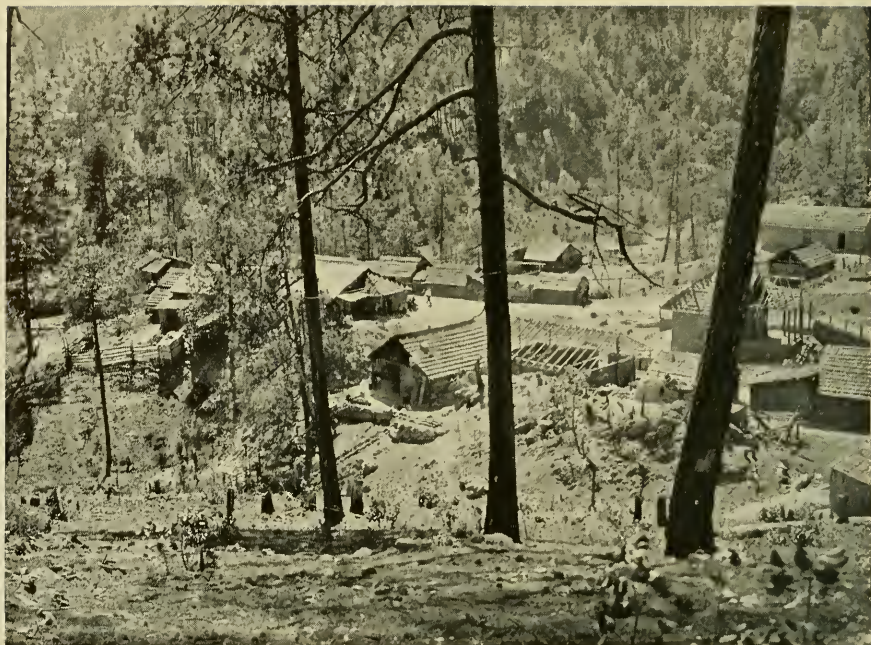


Figure 5

focus to remove their importance. In this case the lighting added solidity to the piece of timber.

Figure 4 illustrates what the miner looks like. I wanted a man who would be typical in dress, and physical make-up. A man who showed the ruggedness of a Mexican miner with heavy lips, a broad nose, dark complexion and the usual moustache and beard. This fellow, Allala, had them. The scar added more than I had anticipated. His hat was appropriate and his clothes were fairly so. "What was he to be doing?" His expressive hands afforded an excuse for a cigarette, and he assumed his own expression of world weariness, which I recorded.

Large Mexican "sombrosos" are advantageous for composition, but cause exposure problems. "Shall I expose for his eyes or for the high-lighted portions of his face and hand?" I struck on a happy medium between the two, and did not burn up the highlights, and also kept detail in the shadows. Close-ups are not as difficult as long shots in this respect. It is really best to remove the subject's hat in most cases, however, especially when working with as bright and contrasty light as is found in Mexico, and other Southern areas.

I hope I have covered points here that will explain what I mean about planning pictures before "snapping." It is *always* too late to put your ideas in effect after your pictures are developed, and it is not always possible to "go back again." The pictures of mine in this issue, and the others in my series, were developed in New York City three weeks after I had left Mexico, therefore there was no "going back."

Bromoil - - - The Ultimate In Control

"Bob" Young, A. R. P. S.

BROMOIL, one of the most flexible of the control processes, is becoming popular in America.

This process, discovered and named some thirty years ago in England, immediately demonstrated its superiority over others of the control mediums. Its successful handling was originally limited to the more advanced workers, and it gained a reputation for being tricky and uncertain. But the results so justified the extra effort that bromoil workers have been with us from the earliest days to the present.

In the beginning, with this as with other control techniques, there were no rule-of-thumb procedures; and no two sets of raw materials, either papers or inks, would be exactly similar.

Now, thanks to the continued efforts of earlier masters, procedures have been standardized. And thanks to the cooperation of the manufacturing interests concerned, especially prepared inks and uniform papers may be purchased at almost any of the larger photo-supply houses.

Sinclair and Drem offer specially prepared inks and brushes. Barnet and Wellington, and in this country, Defender, offer prepared papers which may really be depended upon.

The older "trickiness" has largely disappeared, and both professionals and amateurs are making their appearance as masters of "bromoil" and "bromoil transfer."

The first requirement is for a good negative, from which you must prepare a good bromide print. It is usually remarked that if this phase of photography is still a great mystery, that it is unwise to further compound the error by starting bromoil work. And, certainly, if you first learn to make good enlargements your remaining problems will be much simplified.

In bromoil work you try by photomechanical means to substitute an oil pigment image for a silver one. The beauty of the result is difficult if not impossible to match with any other process.

But to get these effects you require, firstly, a negative which will give luminous shadows that are full of detail, and secondly, a negative which at the same time will give highlights that are not blocked up, but which also carry detail. Try deliberately to get a print which is full of detail and

gradation in both highlight and shadow areas; and let it be a little softer than if this print were to be the end result of your efforts.

It must be insisted upon that in making the enlargement you use only paper which has been especially prepared for bromoil work. Most papers now on the market have a hardened gelatin matrix which is entirely unsuited to the purpose.

Still another precaution bearing on this same point has to do with the developing and fixing of the enlargement. You must not use the ordinary acid-hardening-fixer; and you should choose a developer which is low in hardening action.

While the usual MQ and D72 developers may be used, most bromoil technicians use an amidol formula. The author has found the following spoon formula quite satisfactory and very convenient.

To 16 ounces of water add—

5 teaspoons (level).....	sodium sulphite
1 teaspoon.....	amidol
6 cc. (101 minims).....	10% potassium bromide

This formula has very poor keeping qualities and should be mixed each time it is used. But if properly handled it should have no harmful hardening effect upon the gelatine.

After exposure and development, wash the print for about one minute in running water and then place in a ten per cent solution of straight sodium thiosulphate (hypo).

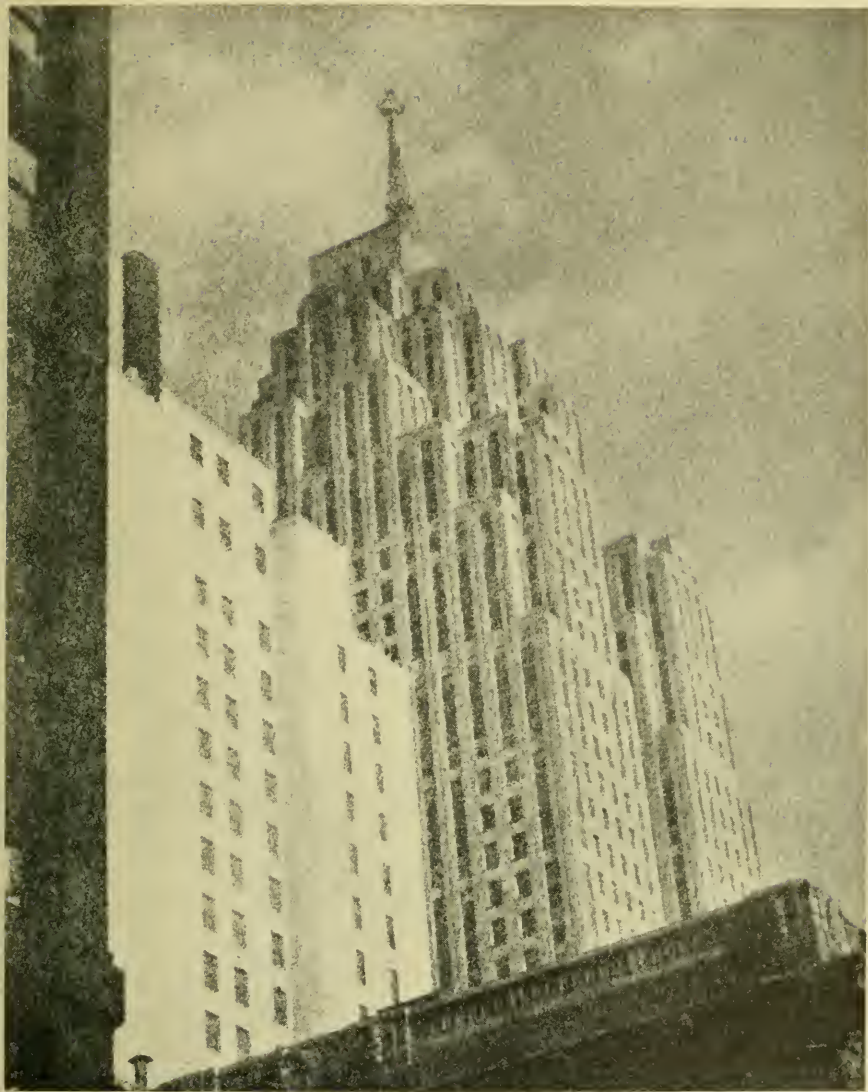
This procedure is successfully followed by many workers. However there are those who recommend the addition of potassium metabisulphite rather than using the straight hypo bath. Hypo, or sodium thiosulphate, is fairly unstable, much more so than commonly supposed. And if much of the developer, through careless washing, is carried into the fixing bath there is an immediate breakdown which not only destroys the fixing action but leads to stains and later complications. The addition of mildly acid potassium metabisulphite eliminates such troubles. Try the following:

	Metric	Avoirdupois
Water.....	1000 cc.	20 ounces
Hypo.....	200 grams	4 ounces
Potassium metabisulphite.....	12 grams	120 grains

Fixing baths using sodium bisulphite where the potassium metabisulphite is used here will probably serve as well. But under no circumstances should you use a specially prepared fixer which contains alum as a hardening agent. Use the above fixing bath for one session only of 6 to 12 prints (11" x 14") and then throw away.

After fixing wash thoroughly *for two hours*. Then dry as usual, and you have a bromide print which looks like any other soft bromide print but which has been prepared especially for bromoil manipulation. The long washing period is necessary because the slightest trace of hypo would completely arrest the chemical action to which the print is next to be subjected.

In what follows we make use, among others, of two quite simple



"Motor City Temple"

"Bob" Young, A. R. P. S.

properties. First, the well established one that oil and water, or grease and water do not mix, or the principle of immiscibility; and, secondly, of the remarkable capacity of unhardened gelatines for swelling when soaked in water, the degree of swelling varying with the temperature of the water. You may, if you like for our purpose, think of the unhardened gelatine as soaking up water much as does a sponge.

The problem is to replace a silver image with a pigment image, and if we can replace the silver image of the bromide print with an invisible but differentially hardened gelatine layer half the problem is solved. Replacing the silver image with a differentially hardened layer of gelatine is exactly what is done in the next stage of the process.

All the following operations may be performed under normal room lighting, either real or artificial.

This next bath serves a double purpose (1) it bleaches out the silver image, and (2) it hardens or "tans" the gelatine in direct proportion to the depth or density of the original silver deposit.

Of bleaching and tanning baths there are many. But because there are so many it does not follow that any old bleach may be used. In this bath you actually watch the silver image disappear—but it is not easy to tell whether the tanning action is being selective or general. For this reason the bath should be prepared with as much if not more care than any of the series. And as part of the general precaution against contamination this solution should be used in an all-glass, or in a rubber tray.

The presence of even minute quantities of iron will cause a general, rather than a selective tanning action. And the use of the ordinary enameled trays which have cracks and pinholes in them that aren't even visible to the naked eye, may lead to trouble later. Rusty sedimentation particles from the plumbing system may be held back by inexpensive tap filters such as may be secured at any hardware store.

The bleaching and tanning bath which the writer uses is known as Hanson's formula, and is as follows:

	Metric	Avoirdupois
Copper sulphate (saturated solution).....	20 cc.	338 minims
Potassium bromide (saturated solution).....	6 cc.	101 minims
Chromic acid (1 per cent).....	18 cc.	306 minims
Water.....	20 cc.	338 minims

Don't compromise on the quality of these chemicals. Cheap grades of copper sulphate often contain iron as an impurity. Keep stock solutions and mix in the above proportions just before using. It is better to work with a little of the fresh bleach for each print and then throw away.

The solutions to be used in the bleaching and tanning, fixing, and washing baths, which must now be prepared, should all be kept somewhere near the same temperature—say between 65° and 70° Fahrenheit.

First, then, soak the bromide print, which has previously dried thoroughly, until limp and wet throughout. Then place the print on a blotting paper and wipe off excess moisture with a chamois. Place the print in a tray and with an even sweep pour the bleaching solution over it. Keep the solution moving and break any air bubbles that form on the surface of the print. The image should clear in from three to five minutes. Always leave

the print in this bath for one or two minutes after the silver has completely disappeared. After this treatment there may still remain a slightly yellowish image which will nearly disappear in the bath to follow—but no silver should remain.

If you wish the image to completely disappear treat the print now with a sulphuric acid solution:

	Metric	Avoirdupois
Water.....	1000 cc.	34 ounces
Sulphuric acid.....	10 cc.	169 minims

And be sure you pour the sulphuric acid into the water and not the water into the acid.

But the above acid treatment is not essential. To proceed without it you take the print from the bleaching bath and wash it in running water for ten minutes, or until the drippings cease to show a yellow color, and then transfer it into either ten per cent hypo solution, or the solution containing both hypo and potassium metabisulphite, the formula for which has already been given. This bath fixes the chemical action of the bleaching bath and prohibits the later reappearance of a secondary image. It is necessary to remove all the bleaching solution by washing or a general tanning will take place in the hypo bath.

After fixing for about fifteen minutes wash for about one-half hour. At this stage it is not necessary to meticulously remove all traces of hypo as in the earlier two hour washing.

If the work up to this stage has been properly done you may now actually feel the image by running the tips of the fingers over the surface of the slippery gelatine matrix. Those areas in which the original silver deposit was greatest have received the greatest hardening, and a "relief" differential has been established between this and the highlight areas which now show the greatest swelling. For the original visible image in silver there has been substituted an altered gelatine matrix in which shadows are registered as depressions and highlights as elevations, and proportionate hardening likewise registers the intermediate or half-tones.

After washing, hang up to dry or dry off surface moisture with a chamois and lay face up on blotters. Don't dry between blotters, for with the treatment the print has been given fuzz from the blotter may stick to the gelatine. If the print curls it makes no difference because it must be soaked again in the treatment to follow.

The matrix was dried at the end of this last operation because in what follows we wish to control the degree of swelling—usually to stop somewhere short of the maximum relief.

There are two factors which control the degree of swelling—(1) the time of soaking and (2) the temperature of the bath in which the soaking takes place. In this operation the matrix will be prepared for the application of a greasy, or oil base pigment.

The equipment required for the actual application includes, a good brush of fitch hair or hog bristles, stag-foot in shape, poppy seed oil or Canada balsam, as a thinning medium for the ink, a good grade chamois to blob up unwanted droplets of water, a mixing palette (which may be a piece of glass), battleship linoleum or a large piece of plate glass as a

support for the matrix while it is being inked, a putty knife, and a box of surgical cotton.

With this equipment assembled the worker is ready for the most fascinating phase of the bromoil procedure. But don't try to work with anything but the regular bromoil brushes, and the regular bromoil inks.

To begin with, place the matrix in a soaking bath (water) at a temperature of 65° F. and allow it to remain there for about twenty minutes—using small blobs of wet surgical cotton to hold it under and being sure that no air bubbles are trapped underneath.

In inking the matrix we are to depend upon the property that the swollen parts of the water-soaked matrix will repel the greasy oil base pigments, and the hardened parts accept it. The intermediate or half-tone areas in the matrix will accept the ink in proportion to their relative amounts of swelling.

The trick now is to match the degree of swelling of the entire matrix to the consistency of the ink to be applied, or the other way around, to match the consistency of the ink to a certain degree of swelling. Actually what is usually done is to compromise on a dual approach—to alter the general swelling just a little, and to modify the consistency of the ink just a little.

The author prefers to start with a matrix which has been given a low degree of swelling and to use a rather hard ink. Then, if necessary, the temperature of the soaking bath is raised in 10° F. jumps until the required swelling is secured. At the same time a good average working consistency of the ink will be approached by slightly softening the hardest grade of ink. Work conservatively from these two approaches.

While the print is soaking prepare the support for the matrix by placing it in a good working condition on any solid table. If this can be on an incline so much the better. Mix and spread the ink you have chosen by squashing it on the palette to a very thin layer with the putty knife. Ordinary white glazed paper makes a very good mixing palette.

The use of small amounts of Canada balsam or poppy seed oil in thinning inks has already been suggested. There is still another and perhaps better method for the beginner. The hardest inks usually come in pots. But for most pot inks there is also a soft ink of the same color marketed in tubes. And probably the most fool proof method of softening the hardest inks is through the admixture of small amounts of a tube ink of the correct color with its counterpart in the pot ink.

It may be perhaps safely said that you will suffer less from over-swelling, if you stay within a temperature range of 65° to 100° F., than you will softening your ink too much. It is true, however, that the greater swelling will require softer and softer inks.

The brush is to be used as the applying and spreading tool and its correct manipulation can be determined only from practice. To an observer, apparently, the same motion used in applying pigment is also the motion used in taking it off. But in your hand the "feeling" of the brush and its action tells you whether you are putting on ink or taking it off. Perhaps "dabbing" comes near to describing the motion which puts pigment on the matrix, and "hopping" or "sweeping" comes near to describing the motion



"East Wind"

"Bob" Young, A. R. P. S.

which takes it off. A quick motion down and a slower motion leaving the paper deposits the ink—just the reverse removes the ink from heavily inked parts.

To continue with the process—next remove the matrix from its soaking bath, place it on a blotter and remove the surface moisture with a blotting motion of the chamois, which you have previously soaked and wrung out. Then place it on the inking support, which in the author's case, is a good thick piece of battleship linoleum, about 18 x 22 inches in size. When thus solidly placed, examine once more under oblique lighting, for any elusive water drops. If these aren't all removed they will travel around under your brush and produce white spots and trails during the pigmenting operation.

After assuring yourself that there are no more blobs of water on the surface, charge the brush with ink by placing it solidly in the small circle of ink on your palette, then on a clean section of the palette dab the brush or tap it up and down in one spot until the charge is uniform—the ink evenly and not too heavily distributed on the brush. If you try to pass directly from a fresh charge of ink to the matrix you are sure to have trouble.

Apply the ink first to a part of the print where you have a highlight next to a shadow. If everything is as it should be, the image will begin to show after two or three taps or dabs of the brush, and the swollen or highlight portion will begin to repulse the ink.

Don't hop from one part of the matrix to another but work gradually from the area in which you have started to all parts of the print, covering it evenly and lightly at first and then gradually building it up. Detailed working-up should be left till all has been covered.

If your brush is too heavily charged, when working in shadow areas, all detail will be lost and the area completely blocked-up—unless, of course, blocking should be the effect desired, as it often is, in bold treatments.

The process of inking up is sometimes referred to as "batting the bromoil." And you need not be afraid to bat it with some energy if you are using the regular bromoil brush. A substitute may quickly puncture the gelatine. As a rule, however, no great energy is needed. If you have closely matched the swelling to the consistency of the ink used the less will be the energy required in "batting." Your success in the matching operations will be indicated by the lightness of the stroke required—and the lighter the stroke the more effective will be the results.

If the matrix should take ink all over, either there is no swelling, or your ink is too soft. To increase the swelling, and of course the contrast, place it once more in a bath the temperature of which you have raised 10° F. You may continue to increase the temperature in 10° jumps up to 100° or even 110°. But always start out with low temperatures and low degrees of swelling. You can always increase the swelling of a matrix which has been properly tanned (up to the limit where the gelatine actually dissolves) but you can never correct a matrix which has been *overswollen*. Try always to work in the middle temperature ranges.

If the matrix takes ink readily in the hardened areas but will show no detail at all in highlight areas then the ink you are using is too hard for the degree of swelling you have. *Slightly* soften your ink and work over once more to bring out the highlight detail.

As you work, especially if you are in a hot and dry room, the moisture will gradually evaporate from your matrix and the relief will disappear. When this point is reached the print will take ink all over—in both highlight and shadow areas. To avoid this, soak the print again in cold water for a period of two or three minutes.

The intervals for resoaking will be determined almost entirely by the rate of evaporation. And even though you soak the matrix in cold water, the relief which was secured under the maximum temperature used will return again. It does no harm for you to resoak an indefinite number of times, but it may not be necessary more than once or twice before you finish.

Little bits of fuzz, hair, and dirt will collect on the print, as you continue with your inking. While this is provoking enough it is really nothing to worry about; because when you resoak, light swabbing with a piece of cotton will remove the foreign particles and may even be used to remove ink in areas in which the application has been too heavy. If the swabbing manipulation, and the handling it involves, leaves a finger print or two, and some streaks across the print it is nothing serious.

Take the matrix once more to the blotter and mop up the extra surface water with the chamois as before. Then after placing the matrix on the support go over the whole surface quickly with a lightly charged brush,

using both tapping and hopping motions to redistribute the ink. All the blemishes from the resoaking operation are removed in this way, the print livened up, and contrasts increased.

By this time the print, with the dirt removed, should begin to look like something. And in fact it is approaching the stage where the operator is likely to ask "How do you know when to quit?"

The best answer to this is given by experience. Many lightly inked prints look very attractive. Many others depend for their effect upon solidity and boldness of treatment. If you want a coarse grained effect do little brushing and work for broad effects. If you want to continue brush work you can reproduce all the detail of a bromide print and yet secure the astonishing gradation and carrying power which only a bromoil seems capable of giving.

There are many variables to watch and that is what makes it fun—because if you do watch them you can control them.

If the entire bromoil sequence had to be completed in one sitting it is quite probable that few people would have the patience or time for it—or any success at all. But like a book of short stories the procedure divides itself into separable sequences quite complete in themselves. It is not necessary to go all the way through to the finished print in one sitting. And although it can be done it is not to be recommended.

For the first stage, concern yourself only with properly preparing several good enlargements. Wash and dry these as described and let that be enough for one evening's work. Next, bleach, wash, and dry the matrices, and let that be enough for the second evening's work. Then when you are ready for the swelling and inking stage you can approach it with the same keenness that you approach a new problem to be solved. And what is more you have several prints to work on and not just one—with which you would, if you had gone straight through, by this time, be just a little tired.

Suppose we say that you have now made your first bromoil. But you have been so busy following "rules and regulations," which will later become quite automatic, that you have had little time to give thought to the technique in its aspect as a control medium. You are more likely to feel at this time that the process is controlling you, not you the process. And it will always be true, of course, with this as with any other technique, that whatever liberty you have will be secured only within the limitations of the medium.

And what are the limitations of this medium?

You can make prints of any size you want, from any size negative. You aren't limited to contact prints only, as you are in most of the control processes. A 35 mm. negative can be made to provide prints which show as much detail and luminosity as those from an 8 x 10.

You can make prints in as many colors as there are pigments available. Most successful color handling in straight bromoil work, however, are monochrome. Polychrome effects too easily become vulgar if not handled with the most severe restraint and with a background of training in color which but few have.

Your effect can be delicate or bold; your treatments in either high or low key; your tone scale may be shorter, or longer than in correspondingly

effective bromide prints. You may present all the detail of which a bromide print is capable, or your treatment may be massive.

Your first control begins, of course, in the enlarging phase, where using all the tricks of dodging and printing you make your first interference with a straight record from the negative. You may even have altered your negative through the use of new coccine or the older methods of retouching and etching. You may have resorted to double printing stunts. But your first control of the matrix proper begins with your matching of inks to swelling.

Some bleaching baths give more contrasty results than others. Some of the papers available give more contrasty results than others. But the operator's first real control in the bromoil operation proper lies in his facility in manipulating the relief of the matrix and the consistency of his inks.

Local modification of either contrasts or drawing are easily within the operator's power. And these modifications may be made either after the print is dry or while it is still wet. Even while the print is wet you can do much with a little piece of plastic or kneaded rubber, to accent highlights, to remove unwanted objects such as telephone wires, to put in paths where there aren't any, to suggest a figure in the distance, or make a barn into a house. A lot of this depends upon your skill as a draughtsman—but control it is, and it is all possible to the good craftsman.

In altering the print while it is still wet care must be taken not to blister the gelatine. Many alterations may be done after the print has dried with the aid of kneaded rubber and etching knife. Hairs left are brushed or picked off at this time and heavy bits of ink removed.

After the really soppy wet stage has passed and before it starts to curl, it is well to place the print between two pieces of good copperplate paper and put a magazine or two on top. This is merely to flatten out the print as it dries.

It may take several days to a week or more for the print to really dry. And the interesting thing about it is that as it dries it actually improves in appearance. It gets added brilliance, depth, and carrying power.

There may be a shininess to the heavier shadow portions which will take all of a month to disappear if you resort to unassisted drying. There is a hurry-up process known as "de-fatting," however, which you may resort to, especially if you find the shininess objectionable.

In this process allow the print to dry in the manner discussed above for about three days. Then gently slide the print into a tray of carbon tetrachloride (carbona) and the grease or oil base will be dissolved out of the matrix—at the same time taking with it the shininess. If the ink is too soft some of it may be removed.

With the print dry you can work on it with almost any of the spotting and retouching methods. You may use spotting brush and india ink, Wolf pencils, paper stumps, or Conte crayons; and even at this late stage, as the author does, an etching knife or scalpel.

Cinema Section

Edited by

William A. Palmer

Film Editing

IT WOULD be interesting to know how many rolls of processed movie film, out of the thousands sold, never receive editing of any sort, but are projected a few times and put away in cardboard boxes on the original 100 foot reels. It is safe to say that the rolls thus denied even the small luxury of a 400 foot reel would run into formidable figures. We who write suggestions in magazines of this sort used to be able to frighten some people into at least hooking four reels together on a large one by dwelling on the dangers of not keeping the precious family documents in a humidifying atmosphere. But this approach to getting a little editing done has been crossed up by the experts who now declare that as long as you keep film under normal conditions of humidity and moderate temperatures you need not fear that they will become too brittle.

To be really honest about it causes one to admit that many amateurs can be quite happy leaving their films in an unedited state. Projecting the films just as the camera left them is not a major crime in all cases. The point to all the zeal shown by us movie writers is that, due to the editing process, real moving pictures can be made. Without editing one usually ends up with nothing more than a collection of animated snapshots. Maybe animated snapshots are all you want and if so, there can be no criticism of showing unedited film *if* you are sure that all scenes are good ones, that they are not excessively long, that there are no camera flashes or jiggles at the start or end of scenes, and that the exposures are uniformly good.

It is a very rare movie maker who shoots film of such a consistently high quality and with such perfect planning that it cannot be improved by editing. This fact will be readily admitted by the most indifferent snapshooters. But what prevents many from getting at an editing job is that either through lack of familiarity with editing technique or lack of convenient editing tools, the job just seems too much of a chore.

Basic Editing

There is a certain amount of going over that all films should have and this could be called basic editing. The object at first is to eliminate camera faults which mar the smoothness of projection. For example, at the start of a scene there is often a frame or two which received too much exposure while the camera was picking up speed. These flash on the screen and should be cut out. Many will hesitate to make a splice between two scenes when they already are in the proper order, but a well made splice is far preferable to a light flash. An

alternative to cutting out a light frame is to opaque the frame completely. This can be done by painting the frame on the emulsion side with retouching opaque, or by sticking a piece of black scotch cellulose tape over the picture area.

Another camera fault at the start of a scene occurs once in a while after the camera has been laid away for a few days with a partially exposed roll of film. The film in the camera mechanism takes a set where it is bent sharply around the film guides. When the camera is used the next time, the film buckles slightly in the gate, throwing the film in and out of focus momentarily. The effect on the screen is that the picture "waves" back and forth. When such motion is noted at the start of a scene the few frames involved can usually be eliminated without cutting much action. It is a good plan to remember to run the camera for about two seconds after it has lain idle, just before it is used again, in order to run the kinked film past the exposure point.

When the operating button is released to stop the camera it will often cause a jiggle which will blur the last few frames. This also is an unpleasant effect on the screen and should be cut out.

Another operation which is a part of basic editing is the elimination of "dead ends" at the beginning or ending of scenes. Most careful movie makers shoot each scene a little longer than they think is really necessary so as to be sure and include all the action. Any awkward pauses at the start or dragging endings can then be easily eliminated, leaving a scene that is timed just right.

Basic editing should also include the elimination of scenes that are just bad photography. Badly over or under exposed scenes or indiscreet panoramas have to have awfully interesting subject matter to justify being retained.

All of the basic editing operations can be done with no more apparatus than a projector and splicer although a set of hand rewinds are an added convenience. The inspection of individual frames can be made by using the lens of the projector as a magnifying glass. Further editing, involving the re-arranging of scenes, insertion of titles, and other final polishing in the most approved style, need not be too formal but it should be done with adequate equipment.

Editing Tools

Like any mechanical job, film editing becomes much easier if the proper tools are used, and the first and most important tool is a good splicer. Here is one item in the line of movie apparatus where one's budget should not skimp. The best that money will buy will repay itself many times in saving of time and the making of trouble proof splices. There are plenty of other pieces of movie apparatus, having widely separated price marks, which will do work of identical quality. The choice of such articles is definitely determined by consideration of budget, appearance, convenience in handling, versatility, etc. But when looking for splicers, shop around in aristocratic classes.

The next most important item on the list of editing tools is a hand rewind set. These are usually purchased in conjunction with the splicer and most often have a geared head on both ends so that the film can be wound back and forth rapidly. The type of rewind outfit which has only one geared rewind, and the other just a plain spindle, is also perfectly satisfactory.

A third item of editing equipment is a viewer. These have been on the market for a long time and most of them consist of a gate through which the film is threaded, an illuminating system, and a magnifying glass or miniature

screen in which the frames can be viewed. The earlier models were not ideal because, while they gave a very good view of a single frame while the film was stationary, the scene became a complete blur as it moved. With such an arrangement it was difficult to get the perspective of the whole scene in determining the proper point for a cut.

Lately, however, there have appeared several viewers with what can be called "optical intermittents." These are very ingenious devices having rotating prisms. The film can be moved along continuously at any speed while the picture appears *in motion* on a small ground glass screen. An investment in one of these intermittent viewers is something that one would never regret, for they make an editing job a matter of mere child's play.

The remaining tools for editing can be home made, consisting of (1) Numbered film compartments for storing individual film scenes, and (2) A wooden spool to fit rewind spindle.

There are many forms of film compartments which have been used. Perhaps the commonest and easiest to procure are egg boxes whose compartments can be numbered readily and which can be closed up to protect stored film from dust. Some amateurs have made film compartments by drilling a large number of $1\frac{1}{2}$ or 2 inch holes in a piece of $\frac{1}{2}$ inch thick board. The board is then fastened down to the editing table making compartments in which small rolls of unmounted film can be placed and held from uncoiling. Another variation is the use of a number of pill boxes which can be fastened to a board with thumb tacks. A more permanent type of compartment can be made from type cases such as those used by printers to store fonts of Capital letters. Wooden cases of this sort are available in many different sizes.

There is a substitute for compartments, in which the scenes are not rolled up but are allowed to lie in a cloth lined basket or barrel. A stick of wood is placed across the top of the barrel and in the wood are driven many small headless nails (old phonograph needles are fine). Each nail is given a number and one end of each scene in the basket is hooked on a nail through one of the perforations. This is a satisfactory method of handling film if the editing can be completed at one sitting. If the job is done piece-meal with intervals of several days during which the scenes are cut apart, covered compartments in which the film is rolled are the best.

The other remaining piece of equipment is a wooden spool to assist in winding the individual scenes up in small rolls without being on a reel. This gadget is an ordinary spool for sewing thread which has finished serving its original purpose. The flange on one edge is cut off and the hole is enlarged with the aid of a penknife to fit the square part of the rewind spindle. The original hole of a thread spool is already the proper diameter to fit the round portion of the rewind spindle. In use, the film is wound around the spool snugly for a turn or two until the friction will hold it from slipping. The length of film can then be wound up, using the thumb and forefinger to guide it. When completely wound up, the roll of film can be slipped off the spool and placed in the proper compartment.

Procedure in Editing

Of course not all film editors work in the same way, but it is well established that if any editing is done which is much more involved than the basic procedure mentioned above, it is a greater saving of time, confusion, and extra work to go

through a regular procedure involving first a break down of the picture into its units (usually individual scenes) and then the later assembly of those units in the new order as determined on paper. Here is the way most good film editors go about the job:

First assuming that a number of 100 foot rolls have been returned from the processing plant and have been screened for a preliminary review, the rolls are rewound and threaded into the projector again. Paper is prepared with three headings for scene number, description and comments. The film is then projected, stopping the projector after every scene and writing down the scenes, numbered as they come on the reel. The film is not attached to the take-up reel of the projector, but is allowed to run out into a clean receptacle of some sort such as a large cardboard carton. Care must be taken that the film does not touch any part of the projector so as to get scratched.

As each scene is projected and the projector stopped just as the start of the next scene has reached the lower projector sprocket, the scene is cut from the roll and then wound up separately by the aid of the wooden spool. This is done with *every* scene, unless it is definitely known that two scenes are already together in the right order and exactly the right length.

Having identified and filed all scenes in the editing compartments, the picture is edited on paper by rearrangement of the scene numbers. In this way, one can study the picture, making alterations and changes freely without any handling of the film. When the most satisfactory order has been figured out, the final step of assembling the picture can be purely mechanical.

When all scenes have been spliced in the order desired, the reel is rewound and screened. Faults are noted such as light flashes, "dead ends," and camera wiggles and corrections made. Thereafter there should be several more screenings for critical analysis, preferably before other spectators who will render an opinion before the film is considered to be in final form.

Questions and Answers

Question: What is the best type of Kodachrome to use when there is a mixture of daylight and artificial light?

Answer: The General Electric Company has just put on the market a new photoflood which has a color matching sunlight so that it can be mixed with daylight and give correct color rendering with regular type Kodachrome. Type A Kodachrome can be used with these new blue lamps but must have the daylight filter in use.

Question: Can 8 mm film be obtained in 100 foot daylight loading spools for the Bolex camera?

Answer: As yet there is no company packing the regular reversal films in 100 foot double 8mm rolls. It is possible to get Gevaert and Eastman positive emulsions in bulk or laboratory packing for processing at home. These come in 100 foot and 400 foot rolls and must be loaded in the dark room. Quite a few amateurs use these "positive" and "sound recording" emulsions for photography in good light outdoors, taking advantage of the great economy. The results, of course, cannot be compared to the regular reversal emulsions.



"Things Past"

William Langdon, Chicago, Ill.

First Award Advanced Class

■ This is a photograph in the surrealistic spirit. Some will find it highly interesting and entertaining, others will condemn it as nonsense. Each one must determine his own attitude, but we would like to say this. Perhaps the most important faculty which the artist possesses is his imagination. Imagination can be cultivated and sharpened immeasurably by practice. We do not know of any effort which is better adapted to stimulating the imagination than intelligent serious work in the surrealistic spirit. Work such as this offers a great challenge to the imagination, and it will also tax the technical ingenuity of even the best photographers. A style of picture-making which provides opportunity for such mental stimulus, is not to be lightly discarded.

Data; 4 x 5 view camera; Zeiss Tessar lens; Agfa Isopan in DK-50; 11 x 14" print on E.K. Opal G, in D-52.

Second Award

Advanced Class



"Composition"

Slavko Smolej,

Jugoslavia

■ The way in which the cliffs in this picture loom out of the shadowed area below is most effective pictorially. Notice also how, by placing a small figure very low in the picture space, the photographer emphasizes the vastness of the scene. Without the small figure so placed the feeling of great size would not be felt so strongly. It is an exceedingly difficult matter to record any variation in tone in snow which is in shadow as is the case here. Consequently we can hardly blame the photographer for the fact that the large expanse of shadowed snow gives a certain monotony—a feeling of unused space to the picture. The present rendition is about as good as could be under the lighting shown. We can readily see, however, that if there could have been a few (even one) shafts of light breaking into the lower part of the picture the monotony of this area would be quickly relieved. Ideally of course such touches of light should point toward the figure.

Data: 6 x 6 cm. Rollicflex; 1/50th sec. at F:5.6, on Perutz Fine Grain Film; green filter 9 A.M. in December; 10 x 12" bromide print.



Third Award

Advanced Class

"Los Nueces"

Miriam L. Dunn,

Chicago, Ill.

■ The figure is nicely placed in the picture space here, and the high camera angle adopted to show the figure against the paving seems fully justified. Given the present negative we would make only one slight alteration in the picture. By trimming about one inch (on the 11 x 14" print) off of all four sides we maintain the present spacing but get rid of most of the dark material in the upper right. Since these dark spots play no necessary part in the picture they are best eliminated, especially since we can do so and still maintain sufficient space about the figure. It is not

difficult to visualize a more effective presentation of this subject. For example, with backlighting from a low angle the camera would pick up much more texture in the paving and the shadow of the figure could be used to break up the foreground and create a more interesting distribution of light and dark.

Data: Leica; Summar lens; Agfa Isopan film; exposure by Sixtus meter; 11 x 14" print.

Fourth Award

Advanced Class

■ It is very interesting to notice the relationship of the foreground to rest of the picture in this case. There is rather an abundance of material shown here, but the intention is that the eye should wander lazily down the street and come to rest on the dome which constitutes the principal interest. It appears to us that the strength of texture and detail in the immediate foreground works against the smooth functioning of such a movement. There is a tendency for the eye to linger unduly in the foreground and to return to it. The reader is asked to appreciate that the effect we are speaking of will not be as apparent in the reproduction because of the great reduction in size. We therefore feel that the composition operates more easily if we trim enough from the base to eliminate a little more than half of the foreground shadow; enough from the left to get rid of the undesirable black pipe at the top; and enough from the right to place the dome slightly to the right of center.

Data: Rolleiflex; 1/100 sec. at F:8, on Agfa panchromatic film with green filter; 12 x 16" print.



"A Street in Sanborni"
Princess E. V. Arenberg,
Munich, Germany

Fifth Award

Advanced Class

■ We feel that this picture is very well done except for certain technical deficiencies. The model is a particularly good choice, for notice how the bushy eyebrow puts punch into the picture. The low position of the eyes in the picture space in combination with the placing of the brim of the hat is most effective. We almost feel that these eyes are peering intently at us through a slit, and this feeling enhances the idea expressed in the title. It is plain that we find here, a well justified exception to the general rule that the eyes are best placed above the center. The picture as we see it has two technical shortcomings. The falling off of definition in the nose and the brim of the hat is disturbing, particularly in the case of the nose, because the transition from out-of focus nose to sharp eye is very abrupt. The retouching shows up rather badly, apparently because of great enlargement from a small portion of the negative.

Data: 9½ x 12" print.



"Penetration II"
Anne Pilger Dewey,
Chicago, Ill.



"Ropes"

Alan C. Johnston, Dallas, Texas

First Award Amateur Class

■ We got into a whale of an argument with the other two judges about the composition of this picture. Mr. Johnson should take satisfaction in knowing that it takes a good picture to start a good argument. We are probably wrong since we were voted down, with hoots and jeers for trimmings. However we are just ornery enough to record our dissenting opinion trusting that the reader will always remember that what is said here is never considered as the last word. Our one ambition is to stimulate thought. We are just as happy when those who think disagree.

The other judges agreed that enough should be added to the bottom of the print so that the eye could see the curve of rope which is now cut away at the base. This would make it easier for the eye to carry around this curve. Even with this correction, the writer feels that the composition weakens toward the right edge to the extent that the rope running out at the lower right seems extraneous. There is also the feeling that the parallelism and the equal spacing of the three strands which run almost vertically is not ideal from the point of view of composition. All of this could be corrected if the rope now running out at the lower right could have been curved back into the picture. This should run in front of the vertical section of rope to the right of center and terminated behind the corresponding section to the left of center. It should curve upward from the lower right corner. It should not carry over into the left third of the picture for this area would then become too crowded. Such a curved line would tie the two halves of the picture together, and it is such a tie that appears to be missing as things are at present. With the picture as shown, we feel a more satisfactory arrangement is obtained if we trim from the right in to the point where the vertical section of rope to the right of center cuts the taut section running horizontally. Notice that this eliminates the section which runs out at the lower right. The point at which these two sections of rope would meet at the edge of the trimmed print is admittedly a weak spot, but it is no more disturbing to our eye than are the other points mentioned above.

Data: Contax; F:2, 50 mm. Zeiss Tessar; 1/100 sec. at F:8, on E. K. Panatomic; 11 x 14" print on E. K. Opal F in D-52. Prints may be obtained at the price of \$15.00 upon application to Camera Craft.

Second Award

Amateur Class

■ Any one who has tried to catch a group of horses in a pleasing arrangement will readily agree that it is far from an easy task. The success of this picture is based on three qualities. First a pleasing arrangement of the group of horses with the white horse dominating the group nicely and being well placed to perform that function. Second, and most important, the group as a whole contains a wonderful feeling of movement which persistently reminds us of a large wave which has just reached the breaking point. This is something more than simple evidence of action in each individual horse. It is a fluid quality in the group as a whole that imparts a "swing" to the picture which is most effective. Third, the group is nicely related to the slope of the hill and well placed in the picture space, and these relationships in turn contribute to the feeling of movement which is so beautifully shown. We do wish that the negative could have received a bit more exposure so that there would be more evidence of form in the shadows.

Data: $1\frac{5}{8} \times 2\frac{1}{4}$ " Super Ikonta C; $1/400$ th sec. at F:5.6, on Agfa Superpan Press in Champlin 16; $10\frac{3}{4} \times 13\frac{1}{4}$ " print on E. K. Kodabrom F-1.



Ross A. Ross
San Francisco, Calif.

Third Award

Amateur Class

■ Ordinarily one relies pretty heavily on the eyes for expression in a portrait. In this case the eye which is shown is obscured by the glasses with the result that attention is concentrated on the lower part of the face. It is interesting to see how expressive the portrait is in this rather severely restricted aspect. The more we adopt limitations of this kind the more careful we must be to see to it that any elements which might compete are likewise severely restricted. In most cases the ear, even in a profile, can be successfully controlled, and Mr. Ward probably included it here as a balancing item to justify the placing of the profile so far to the right in the picture space. As things are, we feel that the ear is too distracting. A better arrangement could be had by trimming the ear away, taking a little off the base and the top and adding enough at the right to achieve a satisfactory balancing of the head within the picture space.

Data: Contax II; exposure by Weston reading; light from window at right; Agfa Supreme in Champlin 15; 11×14 " bromide print.



V. E. Ward
Calpine, Calif.



"Gargoyle"
Phil Barney,
Tampa, Fla.

Fourth Award

Amateur Class

■ Mr. Kitten is a bit frightened and thoroughly mad over the predicament in which he finds himself and Mr. Barney caught the picture at just the right moment. It takes quick thinking and fast work to catch such fleeting bits of action as this, but when the effort is successful, very entertaining pictures result. The placing has been nicely handled but we would, of course, like to see better definition, not only in the kitten but in the foreground material as well. For this particular shot it would appear that a lighting coming from the left rather than the right would be more suitable. With such a lighting the lighting emphasis would be placed on the face so that the interesting expression would be revealed in greater detail.

Data: 6 x 6 cm. Rolleiflex; F:3.8 Zeiss Tessar; 1/50th sec., at F:4 with Proxar supplementary lens; E. K. Panatomic in DK-76; 8 x 10 print on E. K. Opal H.



"For Hire"
Sid Tannen,
Brooklyn, N. Y.

Fifth Award

Amateur Class

■ It is very important for the photographer to have a clear idea of what he is trying to get in a picture, for unless that is done the result is likely to be ambiguous. The present print is an example of such a weakness. If we look at it as a landscape there is too much clutter in the foreground, and there is no really strong center of interest. If we look primarily for design elements in the boats we find that such motifs as are present are gravely weakened by endless repetition and that the material in the upper portion is not part of such a design. The fact that

we can look at the picture in these two ways shows that no dominate theme has been well established and that is what we mean by ambiguity. Trimming will not help in this case so far as we can see. The solution lies in adopting a new camera angle which will definitely emphasize one theme or the other.

Data: Zeiss Ikomat; Zeiss Tessar F:4.5; 1/50th sec. at F:6.3, on E. K. S.S. Pan., in D-76; 11 x 14" print on Veltura Q, in D-72.

CAMERA CRAFT

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: William Langdon, Miriam L. Dunn and Anne Pilger Dewey, for the Fort Dearborn Camera Club; Slavko Smolej, for the Fotoklub Ljubljana.

The following won prizes for their clubs in the Amateur Class: Alan C. Johnston, for the Dallas Pictorialists; Ross A. Ross, for the E.P.I.C. Pool; Phil Barney, for the Florida Camera Club; and Sid Tannen, for the Midwood Camera Club.

The following prize winners have no club affiliations: Princess E. v. Arenberg and V. E. Ward.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Indianapolis Camera Club (Ind.)
Amherst Camera Club (Mass.)	Jefferson City Camera Club (Mo.)
Bell Camera Club (Chicago, Ill.)	Kilgore Kamera Klub (Texas)
Calgary Photographic Society (Canada)	Marin Camera Club (Calif.)
California Camera Club (San Francisco)	Midwood Camera Club (Brooklyn, N. Y.)
Camera Art Club (New Westminster, B.C.)	Montavilla Camera Club (Portland, Ore.)
Camera Club of Richmond (Va.)	Nanticoke Camera Club (Pa.)
Camera Guild of Cleveland (Ohio)	The Pack Rats (Pasadena, Calif.)
Charlotte Camera Club (N. C.)	Photographic Society of San Francisco
Cleveland Photographic Society (Ohio)	Pictorial Camera Club (San Antonio, Texas)
Dallas Pictorialists (Texas)	Pictorial Photographers of America
Detroit Camera Club (Mich.)	Rhineland Camera Club (Wisc.)
E.P.I.C. Pool of San Francisco	Salt Lake Camera Club (Utah)
Florida Camera Club (Tampa, Fla.)	Sierra Camera Club (Sacramento, Calif.)
Fort Dearborn Camera Club	Taft Camera Club (Calif.)
Fotoklub Ljubljana (Yugoslavia)	Troy Photographic Society (N. Y.)
Fotoklub Zagreb (Yugoslavia)	University of Florida Camera Club (Gainesville, Fla.)
Fresno Camera Club (Calif.)	Yellow Springs Camera Club (Ohio)
Glendale Camera Club (Calif.)	
Harrisburg Camera Club (Pa.)	

Standing of Clubs

Large Clubs Advanced Class		Large Clubs Amateur Class	
Fort Dearborn Camera Club.....	17	California Camera Club.....	3
Indianapolis Camera Club.....	8	Indianapolis Camera Club.....	1
Pictorial Photographers of America.....	6		
Fotoklub Ljubljana	4	Small Clubs Amateur Class	
Fotoklub Zagreb	3	E.P.I.C. Pool	8
		Dallas Pictorialists	7
		Florida Camera Club.....	2
		Midwood Camera Club.....	1
		San Jose Camera Club.....	1
Small Clubs Advanced Class			
The Pack Rats.....	4		
Aluminum Camera Club.....	1		

What Is Your Photographic I. Q.?

To test your photographic knowledge, try the following little quiz. Read the statements given below and check the correct answers. Turn to page 145 to determine your score. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good 80%; good 70%; fair to bad, below 70%.

1. Carbon tetrachloride, when used by bromoil workers in cleaning their brushes, must be carefully handled because:

- ☐ It is highly inflammable
- ☐ It gives off a poisonous vapor
- ☐ It stains the hands
- ☐ It breaks down the bristles in the brushes

2. Different colors are due to their different wave lengths. Of the four colors mentioned below check the one having the longest wave length.

- ☐ Red
- ☐ Yellow
- ☐ Blue
- ☒ Violet

3. Present day salons have in general accepted which one of the following mount sizes as being standard:

- ☐ 14 x 18
- ☐ 15 x 20
- ☐ 16 x 20
- ☐ 18 x 22

4. A formula which contains formalin and sodium carbonate would be used for the:

- ☒ Hardening of negatives
- ☐ Intensification of negatives
- ☐ Toning of projection paper
- ☐ Reducing of negatives

5. Lenses are divided into two classes, the converging and diverging. One type is

said to be "thin-edged," the other "thick-edged." Make two checks below, both to indicate a "thin-edged" lens.

- ☐ Double concave
- ☐ Double convex
- ☒ Converging
- ☐ Diverging

6. The slowest exposure at which a camera may be properly hand held is generally considered to be:

- ☐ 1 sec.
- ☐ 1/2 sec.
- ☐ 1/25 sec.
- ☐ 1/100 sec.

7. Louis Daguerre, in his photographic work, collaborated with which one of the following men:

- ☐ Johann Schulze
- ☐ William Talbot
- ☒ Nicephore Niepce
- ☐ Gilles Chretien

8. If a photographic chemical were described as being a white, crystalline powder, a very vigorous absorbent of oxygen, and known as Na_2SO_3 it would be:

- ☐ Potassium Alum
- ☐ Glycin
- ☐ Sodium Borate
- ☒ Sodium Sulphite

9. In pictures taken at high altitudes, the shadows will be:

- ☒ Lighter than usual
- ☐ Darker than usual
- ☐ Same as usual
- ☐ Eliminated

10. If you were to photograph a large fire, which one of the following films would you avoid using:

- ☐ Agfa Superpan
- ☐ Dupont Superior
- ☐ Agfa Plenachrome
- ☒ Eastman Panatomic

Correspondence

Truck Pictures Wanted

Gentlemen:

We are in the market for a number of pictures on truck transportation.

What we desire is pictures that are first pictorially beautiful or interesting and

secondly that have some tie-up with truck transportation. In other words, a truck should be in the picture somewhere, though it may be remote and quite definitely subordinate to the pictorial interest—beautiful canyons, winding mountain roads, won-

derful bridges with a truck somewhere in the picture are the type of thing we are looking for.

Perhaps some of your subscribers might have such pictures. We would appreciate your posting a notice to this effect in the next issue of your magazine.

Very truly yours,

R. L. Polk & Co.

F. J. McGinnis,

Direct Mail Division, Detroit, Mich.

Weston Prints

Dear Sir:

In the current issue of *Camera Craft* you have reproduced with the article by Mr. Weston one of his photographs "Twenty Mule Canyon." Since I am an admirer of Mr. Weston's photographs, and particularly this one, I wonder if you would find out what Mr. Weston would charge for a print of this picture.

Very truly yours,

John M. Stebbins.

Mr. Weston's photographs are available at the price of \$15.00. Address Edward Weston, Route 1, Box 162A, Carmel, Calif.
—Ed.

How Safe Is Safe?

Dear Sirs:

As an interested reader of *Camera Craft* and somewhat of a dark room dabbler, I am taking the liberty to take issue with your explanation of the correct answer to question 9 of your February Photographic I. Q.

If a safe light is "safe" at a distance of, let us say three feet, from the sensitive material in a room painted black, it is not necessarily safe at the same distance in a room painted white. This would be due to the possibility of safe light plus concentrated reflected light. It would, however, be safe at an increased distance from the

sensitive material, and consequently there is no necessity for a black dark room.

I can't agree that, "if a safe light is safe there is no reason to worry about its reflected light." This would assume that light could not be intensified by reflection.

Sincerely,

M. O. Shreve.

Cameras at the Fair

Dear Sirs:

I will appreciate it if you will give me some information on photographing the Fair. Perhaps this could be worked up in C. C.

What restrictions are there in using a camera? What exposure is suggested for Kodachrome stills, at night? Can copies be made of the paintings? Can Kodachrome be processed in S. F., so duds can be re-shot?

Thanks a lot. I greatly enjoy *Camera Craft*, and think you are doing a grand job.

Sincerely yours,

M. S. Benedict.

Cameras may be used freely in all parts of the Golden Gate International Exposition except the Fine Arts Exhibit. In the case of the art exhibit, cameras will have to be checked at the entrance. 35 mm. Kodachrome can be processed in San Francisco providing the emulsion number begins with 4 in the case of Type A or 3 for Regular or Daylight Kodachrome. Cut film must be sent to Rochester, and 35 mm. film beginning with numbers other than those listed above must be sent to Hollywood.

It is hardly possible to indicate an exposure for night shots with any accuracy, but 1 to 2 seconds at F:3.5 would be somewhere near right. The whole question of night shots with Kodachrome at the Fairs will be fully discussed in our April issue.
—Ed.

Club Notes

A free public exhibition of one hundred photographic prints by Edward Weston, one of America's outstanding photographic artists, will be on view at the galleries of the Newark Camera Club, Inc., 683 High St., Newark, N. J., from February 15th to March 15th, inclusive. This will be the first

showing in the east of pictures by Mr. Weston, made under a fellowship awarded by the Guggenheim Foundation. During the first year of this fellowship, Mr. Weston's project was to photograph the significance of the West. Confining himself to California, he traveled twenty-two thou-

sand miles and made more than twelve hundred negatives. The prints to be shown in the Newark Camera Club Exhibition are selected from this remarkable collection. It is suggested that a study of the series of articles by Mr. Weston currently running in Camera Craft, will help many to look at this show with understanding eyes. The Exhibition will be open Saturday and Sunday afternoons from 2:00 to 5:00 and every evening from 7:30 to 10:30.

An exhibition of twenty-one photographs by Brett Weston are now showing at the Vera Jones Bright Galleries, 165 Post St., San Francisco, Calif. Photographers in San Francisco and vicinity will find these excellent photographs well worth a visit to the Galleries. The exhibition will be on view until the end of February. Following the Weston photographs, will be an exhibition of watercolors by Dong Kingman.

The Miniature Camera Club, of Oakland, Calif., have prepared a very attractive prospectus which outlines the aims and activities of the club, conditions of membership, etc. It offers an excellent method of introducing prospective members to the club. The program committee of this group always shows unusual imagination in discovering new places for field trips. Their latest discovery is two "ghost towns" conveniently located a short driving distance from Oakland. The towns are former coal-mining centers near Pittsburg, Calif. The veins of coal were exhausted and the towns were deserted and left to offer photographers picture possibilities. (All this comes as a sort of startling revelation to the writer and it would seem wise for other groups to check on their surrounding territory. Who knows what you might find?)

The Photographic Society of America announces that The Fifth Annual Convention will be held in New York City, on October 7th and 8th. October 6th has been officially designated for the Society by the New York World's Fair. The Foreign Travel Salon Committee announces that there are now six salons slated for exhibition in the United States and that more are expected. Membership in the Photographic Society of America is open to all interested in photography. Active membership is subject to approval by the Membership Com-

mittee and dues are \$5.00 per year. Additional information and application blanks may be had from Byron H. Chatto, Secretary-Treasurer, 1300 Milton Ave., Pittsburgh (18), Pa.

Music, swing and classical, offered members picture opportunities at recent meetings of the Dayton Camera and Cine Club, of Dayton, Ohio. At the January meeting a swing band and dancers were the subjects and at the February meeting the group photographed a classical string orchestra. Another feature of the February meeting, was a flower and pottery display by the Rogers Florist Shop, with Axel Bahnsen demonstrating lighting effects.

The Sixth Annual Competition of Marshall Field & Co., has just been announced. Prints may be submitted in three different classifications: Candid, Amateur, and Advanced Amateur. \$500.00 in prizes will be awarded, as well as gold, silver, and bronze medals. Closing date for entries is May 19th. The Salon will open June 6th and will be hung entirely under glass. Write for entry blanks to Marshall Field & Co., Attention: P. H. Strohm, Section 59, Chicago, Ill.

The Spring Term of the California Camera Club School of Photography will begin March 6th, 7:30 P. M., at the club rooms 45 Polk St., San Francisco, Calif. The School is under the direction of C. Stanton Loeber and Jack Cannon. Tuition is \$5.00.

The San Francisco International Salon of Pictorial Photography, which will be exhibited at the De Young Museum, April 2nd to 30th, 1939, promises to be one of the finest photographic salons this city has ever held. Closing date for entries is March 14th and entry blanks may be obtained from the California Camera Club, 45 Polk St., San Francisco, Calif. The Club reports that entries are flooding in from all over the world. The show is assured of an unusually large attendance as it will be on view during the San Francisco World's Fair.

The KROY Camera Club of the Air, sponsored by Douglas Osborn, 1207 K St., Sacramento, Calif., is now a popular weekly feature in Sacramento and vicinity. Conducted by R. C. Middleton, the program is broadcast over KROY every Sunday from 1:00 to 1:15 P. M.

Western Photo Show, sponsored by the Los Angeles Camera Club, will consist of 1000 prints collected from all the territory west of the Mississippi. The show is being held to celebrate the hundredth anniversary of photography and it will be exhibited in the Biltmore Ballroom, May 19th-21st, inclusive. For complete details write the Los Angeles Camera Club, 2504 West 7th St., Los Angeles, Calif.

The Orange County Camera Club, of Santa Ana, Calif., is now engaged in an undertaking of major importance. The members are engaged in making a pictorial record of Orange County as it is today: its industries, people, beaches, parks and places of interest and beauty, including points of historical interest. Each series when completed will be given to the Local Historical Society and permanently placed on record in the local museum.

The Greater Pittsburgh Photographic Society, of Pittsburgh, Pa., though only one year old is indeed exceedingly lusty for an infant. They report a membership of 125 and capacity attendance at every meeting. More than 4000 people attended the Western Pennsylvania Salon of Photography, which the club sponsored. Club rooms are at 210 Parkway Ave., North Side, Pittsburgh, Pa.

An excellent system of obtaining new prospective members is used by the Orange Camera Club, of East Orange, N. J. In their club bulletin they print a form, addressed to the chairman of the membership committee, which requests the Chairman to invite prospects to the next feature lecture. Thus, it is only necessary for the member to clip the form, list his prospects, and mail it to the Chairman. This eliminates the forgetfulness of members and gets the prospects' names in the hands of the membership committee where they will receive attention.

The Second Annual Photographic Contest and Exhibition, sponsored by the Philadelphia Zoo, offers photographers in Pennsylvania a unique opportunity for pictures. The Philadelphia Zoo has made special arrangements that will allow photographers many unusual picture opportunities. Camera Clubs are particularly invited and for groups of ten or more special

guides will conduct a "behind the scenes" tour of the Zoo. Entries to the contest need not be animal subjects but all pictures must be taken within the Zoo grounds. Closing date is April 23rd and the prints will be exhibited at the Zoo from May 7th to 14th. Entries will be in three classifications depending upon the photographer's experience. Rolleicord II cameras will be first awards in two groups and many other prizes will be distributed. An entry blank and full details may be obtained by writing the Philadelphia Zoo, 34th St. and Girard Ave., Philadelphia, Pa. This seems like a fine opportunity for photographers and a splendid idea for promotion in other communities.

The Editors of "Modern Photography" are now assembling material for the 1939-40 issue of this annual and would be glad to receive material from photographers interested in submitting. Photographs should be sent, not later than March 15th, to the Studio Publications, Inc., 381 Fourth Ave., New York City, and all will be returned after use. Glossy prints are preferred.

The Miniature Camera Club of Philadelphia, Pa., presented an interesting innovation at a recent January meeting. A question and answer contest on photographic any club a very interesting and informative subjects was held with six teams of members competing. Such an event should offer evening as it would certainly sharpen up the rusty knowledge of members.

The Marin Camera Club, of Marin County, Calif., comprises a group of amateurs interested in all phases of photography. They conduct a program of pictorial print competitions, lectures, field trips, beginners classes, technical demonstrations and exhibitions. Meetings are held the second Thursday of each month at the Ross Community House.

The Franklin Institute, of Philadelphia, Pa., announces the opening of a Photographic Museum which shows how photography has developed since its beginning one hundred years ago. The Museum is on the Mezzanine Floor of the Institute and they are also displaying a loan exhibition of 100 outstanding American photographs of the year.

Notes and Comments

The new **P. & H. Process** for developing films is discussed in the reading section of this issue of *Camera Craft*. Perry & Houston, 6646 Santa Monica Blvd., Hollywood, Calif., manufacturers of the equipment for this sensational new process announce that the material is now available.

The results with this process are obtained by sealing the developing agent in the emulsion of the film during most of the development period.

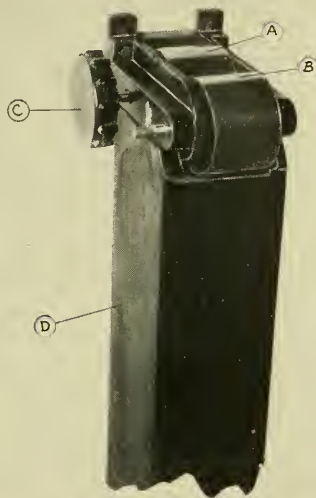


Figure 1

This requires for roll film an apparatus such as the Roll-O-Wrapper, shown in Figure 1, consisting of two rollers, "A" and "B," having a smooth special celluloid tape wound around roller "A" in one direction and "B" in the opposite direction. Thus if the end of the saturated film is started between the rollers with a turn of knob "C" it can be squeezed in contact with the celluloid tape and wrapped up at the same time, by continued turning of knob "C." This completes the process until time to remove the film, which is done by placing knob "C" on the roller "B" shaft, and turning in the same direction, when the film

will emerge completely developed and ready for the hypo.

With the Roll-O-Wrapper is furnished a deep saturated tank "D," the necessary developer and complete instructions giving also saturation time and film speeds for the new process.



Figure 2

The Roll-O-Wringer shown in Figure 2 is the companion to the Roll-O-Wrapper, being designed for cut film and film packs, up to 4" x 5".

In operation the film is placed on a clip and saturated for the required time (depending on the emulsion) in developer tank "A," then removed and placed face down on one of the plates which has been removed from plate tank "B," the plate and film are then inserted in Roll-O-Wringer "E" drawn through, squeezing the two in contact, placed in process tank "C," covered up and left until development is complete.

The Roll-O-Wringer is furnished with tank, light tight lid, six ground edge processing plates and developer complete.

A new Model "F" Range Finder for $3\frac{1}{4}$ x $4\frac{1}{4}$ and 4 x 5 Speed Graphic cameras has just been announced by the Kalart Co., 915 Broadway, New York City. The Model "F" offers an astonishingly large adjustment range for accommodating auxiliary lenses and will focus a lens as closely as $3\frac{1}{2}$ to 4

CAMERA CRAFT

feet. It is possible to adjust this new range finder for use with lenses of from 10.5 cm. to 30 cm. With the 4 x 5 Graphic, the closest working distance is 3½ feet with a 10.5 cm. lens and 8 feet with a 30 cm. lens. With the 3¼ x 4¼ Graphic, the closest working distance is 3½ feet with a 10.5 cm. lens and 6 feet with a 21 cm. lens. The new Model "F" is priced at \$24.00. Write the above address for complete details.

New lenses for Kodachrome have just been introduced by the C. P. Goerz American Optical Co., 317 East 34th St., New York City. To meet the demand of the photo-engraver for a highly color-corrected lens of relatively short focal length to make 35mm. Kodachrome blow-ups, Goerz brought out two new sizes of their celebrated Apochromat Artar F.9. The new Artars with 4 in. and 6 in. focal length are ideal for this purpose.

Three new daylight-type photoflood lamps have been announced by the General Electric Co. Otherwise identical to other G. E. photoflood lamps, the new lamps will be equipped with inside-frosted blue daylight-type bulbs. Prices are 50c for No. 1; \$1.00 for No. 2; and \$2.50 for No. 4.

A moderately priced projector for 2" x 2" slides has been introduced by the Spencer Lens Co., of Buffalo, N. Y. The new projector is called the Model MK Delineascope and is priced at \$22.50. The projector will soon be supplied with many accessories that will increase its usefulness. See it at your dealer's or write the above address for complete details.

New Burke & James Bargain Catalogue is now ready for publication. The catalogue will be 80 large pages, the equivalent of 160 pages of the usual size, and it will contain many unusual bargains marked down for Spring clearance. Write Burke & James, Inc., 223 W. Madison St., Chicago, Ill., for your free copy.

New Willoughbys Bargain Catalogue No. 1238 is now ready for distribution. 28 pages of bargains in all types of cameras and accessories. Write Willoughbys, 110 West 32nd St., New York City, for your free copy.

Correction. In the February issue the Filmarus "O" Enlarger, equipped with an F4.5 Anastigmat lens, was listed at a price

of \$36.00. The correct price for this enlarger is \$32.50. For complete details on the Filmarus "O" Enlargers, write the Medo Photo Supply Corp., 15 West 47th St., New York City.

Morgan & Lester, publishers of the "Leica Manual" and "Miniature Camera Work," announce that 12,500 of the former book were sold during 1938, while 10,000 of the latter were sold during the last six months of the year. The tremendous popularity of these books testifies to their excellence. In response to many inquiries, they announce that, as the "Leica Manual" is at present thoroughly up-to-date, there will be no new edition until some time in 1940.

The new Morgan Camera Shop at 6262 Sunset Blvd., Hollywood, Calif., offers the very latest in photographic store design. Marshall P. Wilkinson, the architect, created a compact building suitable to the location and the needs of a modern photographic business. Store interiors, also in the modern trend, were designed by J. R. Davidson. Write for a copy of this modern camera house's interesting "Morgan Camera News."

Mag-Ni-Line Products, 3456 E. Jefferson, Detroit, Mich., offer six models of high-grade magnifying instruments ingeniously arranged on a standard which holds the lens in any desired position and leaves the hands free. These are excellent for viewing contact prints and negatives, as well as checking the focus in projection printing. A free descriptive circular will be sent upon request.

The Northern Photo Supply Co., 521 Second Ave., North, Minneapolis, Minn., has recently installed a projection room in addition to the many other services this photographic supply house offers. The projection room is designed like a miniature motion picture theatre, with an automatic curtain that opens and closes at the pressure of an electric button. Completely finished in decorative, sound-proofing Nu-Wood, the new projection room is sure to meet with the approval of movie fans in Minneapolis.

Gamma "D," the Atomic Fine Grain Developer, specified by William Mortensen, has just been reduced in price from \$2.15 to

\$1.60 for 32 ounces. This price change has been made possible by the large volume of sales this popular developer has enjoyed and the lower cost should allow many more camera enthusiasts to use Gamma "D."

Western Photo Finishers and Photographic Dealers are holding a convention, March 17th and 18th, at the Leamington Hotel, Oakland, Calif. Complete details may be had from Merle Lovett, 3322 East 14th St., Oakland, Calif., or from Nathan Reiman, 528 East Main St., Stockton, Calif.

A new 104 page Catalogue of exceptional bargains in cameras and accessories, is being offered free of charge by the Penn Camera Exchange, Inc., 126 W. 32nd St., New York City. Penn features a Guarantee Bond with every purchase. Write for your copy today. Ask for catalogue CC.

Bryant C. Rogers, offering complete natural color service, has enlarged his plant and increased equipment so as to give more efficient service to his customers. Visitors are invited to inspect displays at the new studio and plant, 5431 College Ave., Oakland, Calif.

The Univex Super-Speed Mercury Camera, a new 35mm. camera that offers many sensational features, at an unusually low price, was recently placed on the market. Priced at \$25.00, with a Tricor F3.5 lens, some of its many features are: a 1/1000th of a second shutter; built-in photoflash synchronizer; built-in optical view-finder; automatic film transport that makes double exposures impossible; interchangeable lens equipment; helical focusing mount, graduations from 1½ feet to infinity; range-finder mounting; automatic exposure calculator; and it uses inexpensive 35mm. film. A free booklet, describing this new camera completely, will be sent free upon request to: The Universal Camera Corp., Dept. M-4, New York, N. Y.

The Schicklerling Automatic-Precision Synchronizer, complete with a specially constructed reflector for the Schicklerling 1000-Flash Lamp, may be adapted to any camera. The synchronizer is attached to the camera and the cable release is screwed into the shutter, the impulse is obtained by plugging into the nearest light socket. The reflector is the clamp-on type. Then, it is only necessary to press down a plunger

and the flash and shutter synchronize perfectly. The flash may be regulated for short or long flashes by holding down or releasing the plunger. Schicklerling are also supplying a free pocket exposure guide for use with their lamps. Write the Conrad Schicklerling Laboratories, Orange, N. J., for complete details.

Simpson's Camera Stores, of Los Angeles, Calif., have moved their main offices and store from 3150 Wilshire Blvd. to 3764 Wilshire Blvd.

The Wesco Fadette, presented by the Western Movie Supply Co., 254 Sutter St., San Francisco, Calif., permits amateur movie fans to add a really professional touch to their work. It is easily adapted to all movie cameras. The Wesco Fadette is not to be confused with the old fashioned vignette, for the fade produced is oblong and the frame size becomes smaller as it fades. Write the above address for complete details or see it at your dealer's.

"Selecting Your Miniature Camera Film," is the title of a new booklet just published by the Agfa Ansco Corporation, of Binghamton, N. Y. This booklet describes the properties and characteristics of the Agfa Films and would be a distinct aid in helping the photographer to select the proper film for a given type of subject. Exposure information, filter factors, development procedure, etc., are also given in the book. A copy will be sent free upon request to the above address.

Ace Genuine Hard Rubber Trays are available in a full range of sizes from 4 x 6 inches to 20 x 24 inches. All trays are made of Ace Hard Rubber, a material famous for its chemical-resistant properties. Ace Trays are rugged, strong, easy to keep clean and there is no surface chipping or corrosion. See these trays at your dealer's or write the American Hard Rubber Co., 12 Mercer St., New York, N. Y., for a descriptive circular.

The Devin Colorgraph Co. announces the publication of a new booklet on the making of color prints by the tricolor pigment process. This process is also known as carbonyl. The booklet brings the most up-to-date information available. Many of the methods and formulas were developed by years of research in the Devin organization, manufacturers of the Devin one-ex-

posure tricolor cameras, and Devin Tricolor pigment tissue. Among these formulas is the already famous Devin single-bath bleach. The book is satisfactory for either professional or amateur, as a special set of inexpensive materials is recommended for amateur use. The booklet sells for 35c and can be secured from your local photographic dealer or from the Devin Colorgraph Co., 305 East 43rd St., New York, N. Y.

Four Models of Detrola Cameras have been introduced by the Detrola Corp., 1501 Beard Ave., Detroit, Mich. All these cameras are of the so called "candid type." They take 16 pictures, $1\frac{1}{8} \times 2\frac{1}{2}$ inches, on 8 exposure Eastman 127 or Agfa A8 film. The cameras range in price from \$3.95 for Model A to \$19.50 for Model E. Models B, D, and E are equipped with a built-in exposure indicator. Model E, price \$19.50, has an F:3.5 Wollensack Velosigmat lens with Wollensack "Deltax" shutter, speeds from 1/25 to 1/200 second. Accurate focusing from 3 feet to infinity and optical view finder. Model D is the same as E, except that it has a F:4.5 lens and is priced at \$15.00. Model B has a F:7.9 lens and is equipped for time, bulb and instantaneous exposures. Price is \$9.50. Model A, price \$3.95, has an optical view finder, an Ilex Meniscus lens, time or instantaneous exposures. See these cameras at your dealer's or write the above address for complete details.

The schedule of the 1939 Kodak Exhibit for the next month is: Indianapolis, February 23-26; Chicago, March 2-7; Milwaukee, March 10-12; Minneapolis, March 16-19; St. Paul, March 21-23; Denver, March 28-April 1; Kansas City, April 6-9.

Kodak Panatomic-X, the new Eastman extra fine grain film, formerly available only to 35mm. camera users, is now ready in a large variety of roll film and film pack sizes.

The Protyme Photo-Electric Photometer, made by the J-M-P Mfg. Co., 3026 N. 34th St., Milwaukee, Wis., now uses a 100% voltage regular, an illuminated meter, and an "eye" having an area of under $\frac{1}{4}$ sq. in. These features promote unusual accuracy in measuring light for projection printing and for balancing color separation

negatives. See the Protyme at your dealer's or write the above address for complete details.

Loeber's, a new photographic store in San Francisco, will open February 20th, at 70 Post St. Under the direction of C. Stanton Loeber and Jack Cannon, two of San Francisco's most popular photographers, the new store will offer complete photographic service. As these gentlemen say, "It will be a store run by amateur photographers for amateur photographers," and this viewpoint and the wide photographic experience of these two men will bring cameraddicts flocking to their shop. Loeber's will feature personal attention to each customer's problems. Another feature of the store's service will be high-grade developing and printing. Visit the new store and ask Stan Loeber or Jack Cannon about your photographic problems.

The Hutcho Adjustable Hypo-Drain, manufactured by the Hutcho Laboratories, 8437 Hollywood Blvd., Hollywood, Calif., makes an exceptionally efficient print washer out of any sink. It gives rapid and continuous change of water and may be quickly adjusted to any flow desired. It is priced at \$1.00. See it at your dealer's or write the above address.

ANSWERS TO "WHAT IS YOUR PHOTOGRAPHIC I.Q.?"

From page 138

1. Carbon tetrachloride gives off a poisonous vapor. It is a heavy, colorless liquid that will not burn; it gives off poisonous fumes to the extent that it may cause death. Clean brushes out-of-doors or at least at an open window.

2. The waves of red light are longest and those of violet are shortest. The approximate wave length of red is .000068 cm.; yellow, .000058 cm.; blue, .000046 cm.; violet, .000040 cm.

3. The most generally recognized standard size of mounts is 16 x 20.

4. A formula containing formalin and sodium carbonate would be employed for hardening of negatives for after-treatment. After negatives have been processed for chemical reduction, intensification, or stain removal, there is a softening action on the emulsion so precautions must be taken for after-treatment.

5. The double convex lens is of the "thin-edged" or converging type.

6. One twenty fifth of a second is generally accepted as being the longest exposure at which a camera may be successfully hand held; even at this exposure great care must be exercised so as not to move the camera.

7. Louis Daguerre and Nicephore Niepce collaborated in their photographic work. In 1829 they actually formed articles of partnership.

8. Sodium sulphite.

9. Darker than usual. In mountain or high altitude photography it has been found that the rarer the atmosphere the less diffusion of light, this accounting for the darker shadows.

10. Plenachrome, not being sensitive to red, would be a poor choice to use for photographing fire. Any panchromatic type of film would be appropriate.

CLASSIFIED ADVERTISEMENTS

Rate: 6 cents a word; minimum \$1.50 each insertion, prepaid.

Items advertised in these columns may be purchased C.O.D. subject to examination and C.O.D. subject to ten days free trial if sent by express. If in doubt, safeguard yourself.

OUTFITS FOR SALE

◆ Collection of negatives and prints of different places in China and things Chinese. Arthur R. Murray, 747 Crocker St., Los Angeles, Calif.

◆ Bantam Special with everready case, yellow filter, six rolls of infra-red film, \$59.00. R. E. Pirtle, Hamilton Field, Calif.

◆ 4 x 5 Graflex D, Schneider F 3.5 lens, 5 plate holders with sheaths, Pack Adapter, case—very little use, all for \$150.00. Will take Series D with Eastman F 4.5 to apply. Chas. Bates, 203 Stambaugh, Redwood City, Calif.

◆ Graflex 3 1/4 x 4 1/4 Tele., \$35.00. 7 in. Xenar 3.5 in barrel, \$35.00. 7 in. Zeiss 4.5 in barrel, \$25.00. 7 in. Turner-Reich in shutter, \$35.00. 35 Baldwin 2.8, \$24.00. Cirkut camera No. 5, \$40.00. 6025 Wanda Ave., St. Louis, Mo.

◆ Kodak Retina II; f:2.0 lens. Coupled range finder. Practically unused; original packing. Lists \$140.00. Sell for \$115.00. Winslow Stewart, 50 Morlan Ave., San Jose, Calif.

POSITIONS WANTED

◆ An all around photographer wants work in studio or commercial. Can go anywhere. Address A.R.P., Care Camera Craft, 425 Bush St., San Francisco, Calif.

◆ Photographer, 3 1/2 years photo experience, U. S. Marine Corps. Graduate Naval School of Photography. Experienced all types aerial and ground work, some movies, all laboratory work. References. Free after April 16. Go anywhere. Write Cpl. D. E. Clark, Aircraft Two, Naval Air Station, San Diego, Calif.

PHOTO POSTCARDS

Extra profits to professional photographers, dealers, etc. Let us make your postcards, prints, packets, copies and photo greetings. Ferrotyped postcards \$15.00 per M. Also display racks. Stamped envelope brings samples and price list.

View Photographers Wanted

NATIONAL VIEW CO., Box 85-C, Winona, Minn.

Money Loaned On Cameras,

lenses, binoculars, microscopes. No storage charges. All loans good for one year. H. Stern Inc., 872 Sixth Ave. (at 31st St.) New York. Bonded pawnbrokers since 1858. Unredeemed bargains available.

HOW TO USE YOUR CAMERA

By George Allen Young, Editor of Camera Craft

25 cents from your dealer or

CAMERA CRAFT, 425 Bush St., San Francisco, Calif.

FOR SALE OR EXCHANGE

◆ Will exchange 9 x 12 cm. Certo with F:4.5 Zeiss Tessar in Compur for 4x5 Speed Graphic or other 4x5 leather covered camera. J. F. Chappell, Mount Hamilton, Calif.

STUDIOS FOR SALE

◆ Well established and equipped commercial photographic plant, centrally located, doing a profitable large mail order business, mostly wholesale. Low overhead. Details for stamped envelope. Address D. F. S., Care Camera Craft, 425 Bush St., San Francisco, Calif.

STUDIOS WANTED

◆ Wanted to buy portrait and commercial studio. Address W. C. S., Care Camera Craft, 425 Bush St., San Francisco, Calif.

OUTFITS WANTED

◆ Super Ikonta B, F 2.8 lens. Give lowest price. S. Tarose, 8395 Wallace, Apt. 6, Detroit, Mich.

◆ Good used miniature or small reflex camera, also exposure meter. Give price and describe fully first letter. Arthur Nimitz, 508 East View, Chattanooga, Tenn.

8x10 Studio camera and stand.....	\$30.00
4x5 R. B. Graflex and accessories.....	40.00
8x10 View camera holder and case.....	15.00
8 1/2 in. Graf F4.5 Super anas. in bbl.....	30.00
5 in. Cooke Aviar F4.5 in Compound.....	25.00
2 in. Steinheil Cassar F2.5 in bbl.....	15.00
8x10 Band L Protar F12.5 in bbl.....	20.00
2 1/4 x 3 1/4 Enlarger F8 lens.....	10.00
Want 4x6 or 5x7 enlarger or what have you.	
JESSE RORABAUGH	BEATRICE, NEBR.

RECOMAR, 2 1/4 x 3 1/4 F4.5 Compur shutter.....	\$32.50
GRAFLEX C, 3 1/4 x 4 1/4 Cooke F2.5 FPA.....	97.50
ROLLEIFLEX, 6x6 cm. F3.5 Eveready Case.....	65.00
FILMO 70A, F3.5, Case \$37.50, Cooke F1.8.....	60.00
GRAFLEX, 4x5 R. B., K. A. F4.5 lens FPA.....	75.00
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NATIONAL CAMERA EXCHANGE
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CAMERA CRAFT



"Laughing Girl"

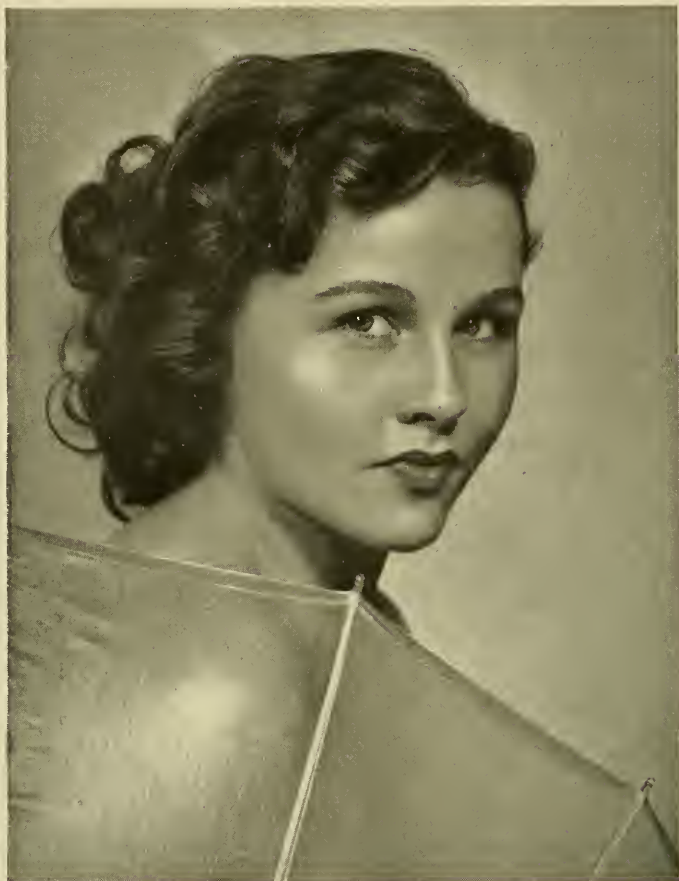
Robert Officer

22nd Los Angeles International Salon

April 1939

PRICE 25c

MORE ON THE P. & H. PROCESS . . . H. C. Benedict, Ph. D.
SHOOTING THE FAIRS AT NIGHT . . . William A. Palmer
RECORD PHOTOGRAPHY . . . Harold G. Grainger, A. R. P. S.



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LAGUNA BEACH CALIFORNIA

NOTE: AS A CONVENIENCE TO HIS STUDENTS AND TO READERS OF HIS LATEST BOOK, **PRINT FINISHING** (CAMERA CRAFT, 1938), MR. MORTENSEN HAS ARRANGED WITH OXFORD PRODUCTS COMPANY, BEVERLY HILLS, CALIFORNIA, TO PROVIDE COMPLETE KITS OF MATERIALS FOR THE ABRASION-TONE PROCESS. THE KITS DIRECT FROM OXFORD PRODUCTS COMPANY OR THEIR DEALERS AT \$4.00 COMPLETE.



"Atlantic"

Thomas O. Sheckell

22nd Los Angeles International Salon

That P. & H. Process Is Here Again

H. C. Benedict, Ph. D.

LISTENING in on a telephone conversation. . . .

Of course I've tried the P. and H. Process. In fact, except for some routine things, I doubt if I will use anything else.

Read the article in Camera Craft? Why, man I wrote it!

Yes, Honestly!

You better dig out your copy and read it right now. You're missing something worth while knowing.

Sure, come right over. I've got some new dope on the process too.

Last month I let myself be carried away by my enthusiasm for the P. and H. Process of negative development. No, "carried away" is too strong and implies an excessive and unwarranted devotion. The truth is that, the more I use the process, and the more I hear from others who are using it, the surer I am that it justifies one's very deliberate consideration. The camera periodicals are full of new trick methods of development and undoubtedly many of you have poured lots of chemicals down the sink and dumped much film into the basket to your disappointment and justifiably intense disgust with all so-called new methods. At least, that has been my



DK-20



P. and H. Process

Figure 1

reaction. I have prided myself on being something of a "fool-killer" on the subject of fanciful developing procedures. But from the results I have gotten with the P. and H. Process I am quite sure I am not a dupe. If you missed the description of this process, find a copy of last month's *Camera Craft* and climb on the band wagon.

You will remember that I gave the bare bones of the process so that each of you could experiment, confirm my results and share my enthusiasm. I was emphatic about the advantage or necessity for using some Perry designed equipment. I want to give you some information about its use so that you can get even better results than you have already. I won't burden you with pictures of the apparatus as you can see them elsewhere (page 142 March *Camera Craft*) and I want more room to tell you about some new interesting results I have obtained.

Last month's illustrations were made using a hand squeegee, which is all right for experimental purposes, but does not give as consistent results as the special apparatus. For cut film Mr. Perry has devised a modified miniature clothes wringer, with soft rubber rollers and springs to maintain a constant pressure between them. When this is fastened to the work bench only one motion is required to put the glass plate and film through. There is no groping in the dark for a squeegee, no fumbling for the film with consequent danger of putting your fingers on it or on the plate, no rolling back and forth of the squeegee and no doubt as to whether or not you have



Figure 2

P. and H. Process

DK-20

applied the correct pressure. Pairs of identically exposed negatives were made on Eastman Portrait Panchromatic Cut Film in a Graflex and one of each pair was developed by the P. and H. Process using the P. and H. Roll-O-Wringer, the other of the pair was developed in DK20. You can't miss the extra shadow detail under the nose and chin in Figure 1. A result I did not mention in the first article is clearly shown in the cuts of the cup (Figure 2.) You can read right through the high-lights in the P. and H. negative. Incidentally, a darker print of the DK20 negative does not materially improve matters, it merely causes the cup to blend into the background. So we must add *anti-halation* to our list of virtues for the P. and H. Process.

If you roll-film users felt hurt about being left out of things in the first article, I think I can more than make it up to you now. You be the judge. Mr. Perry has designed a most ingenious contrivance for use with roll film. It consists of two rollers, hard this time, with constant pressure maintained by springs. A strip of material like film base (celluloid) winds from one roll on to the other. This apron serves the purpose of the glass in the cut film processing, as the film is wound on to one roll with a layer of the apron between layers of the film. (This differs from other developing tanks with aprons in that the film is here in intimate contact with the apron.) The rollers squeegee off excess developer and the whole device is placed in a tank of water at the desired temperature, (about 70°F.). Mr. Perry recommends the use of a deep tank for the developer, but I have used a reel tank with excellent results. Here is the outline of the development of roll films:

1. Immerse film in the developer at 55°F. for about a minute.

2. Roll up the film on the P. and H. Roll-O-Wrapper.
3. Place Roll-O-Wrapper in water for 15 to 30 minutes.
4. Remove film, fix, wash and dry.

Not too hard, is it?

As a starter you can use DK50R developer as suggested last time, although better results have been obtained with other developers. I have found that 60 to 70 seconds immersion in this developer works nicely on Agfa Finopan. Mr. Perry has discovered some valuable new developers and has found that the immersion time of the film in the developer may vary with different types of film.* These results are too voluminous for an article so he is writing a book on his process. Watch for it.

The following illustrations were all taken in duplicate with an Argus AF Camera on Finopan film and were developed in DK20 and P. and H. Process respectively.

A faculty which will be of particular interest to roll-film users is the remarkable and almost inexplicable capacity the P. and H. Process has for neutralizing incorrect exposures, enabling you to obtain far better results from over or under exposed negatives. And if this isn't a much craved boon, I don't know one. Maybe I am just "projecting," as the psychologists say. I certainly have done my share of praying. Figure 3 is my evidence for this *equalization*. The film positives were given identical exposures all along the strips and were then developed together in D-16. The exposure data for the negatives are given alongside the corresponding positives. The almost incredible result is that the under exposed negative P. and H. processed is far better than its partner. Also there is an adjustment in printing density. You can't help but think there is some hocus-pocus about it. Neither could I when I first saw one of Mr. Perry's negative strips. I tried to blame it on a faulty camera, on a fluke, on anything except believing my own eyes. You probably want to say that my camera or shutter is to blame, but I have repeated it in duplicate with the same results and to forestall such comments I borrowed a new Contax and made more exposures in duplicate, still with the same excellent results. In one test made with the Contax on Gevaert Panchromosa I started at f:2. and 1/25 sec. (a gross over exposure for bright sunlight) and halved the exposure each time by closing the diaphragm or speeding the shutter until I had reached f:22. and 1/1250 sec. The film developed in DK20 was quite blank at one end and black at the other as you would expect but not so the strip which was P. and H. processed. It was naturally underexposed but a recognizable print could be made from the thin end, and, while poor, a print could be made at the other end. You can calculate it yourself, the

*The following formula is recommended.

	Metric	Avoirdupois
Water.....	1 liter	20 ounces
Metol.....	2½ grams	25 grains
Sodium Sulphite.....	30 grams	300 grains
Hydroquinone.....	20 grams	200 grains
Perryimide**.....	40 grams	400 grains

**Perryimide is a special alkalinizing agent manufactured by Perry & Houston, Hollywood. Packaged developers are also available.

f:4.5, 1/25 second

f:4.5, 1/50 second

f:4.5, 1/100 second

f:4.5, 1/200 second

f:5.6, 1/200 second

f:8, 1/200 second

f:11, 1/200 second



Figure 3



*Upper left, f:4.5, 1/25 second,
DK—20*

*Lower left, f:11, 1/200 second,
DK—20*

*Upper right, f:4.5, 1/200 second,
P. and H. Process*

*Lower right, f:11, 1/200 second,
P. and H. Process*

Figure 4

range of exposure is over one to two thousand. Not that I recommend throwing away your exposure meters, but it is a remarkable latitude.

Some larger prints to show this effect are given in figures 4 and 5. These were made with the Argus in a similar fashion, and show only the extremes. Note the marked improvement in shadow detail in the hair and under the trees, and particularly the better minute detail in the texture of the sweater. The range of exposures calculates to be one to sixty-four, but even if this is not entirely correct the duplicates developed in DK20 tell the story better than I can in words.

Thirty-five millimeter fans may have shuddered when you read last month that a very active concentrated developer was used in this process, you saw your hopes of fine grain go glimmering. To set your little hearts at rest I have included two portions of these tests enlarged 20 times. It may not be evident in the reproduction but it seems from these and other tests I have made, along with microscopic examinations, that the grain is possibly a shade coarser, but really very close to that obtained with DK20 and remember I was *not* using one of Mr. Perry's new fine grain developers.

There is so much more that could be said, I have no idea when to stop. For those of you who have stayed with me so far I will summarize the



*Upper left, $f:4.5$, $1/25$ second
DK—20*

*Lower left, $f:11$, $1/200$ second,
DK—20*

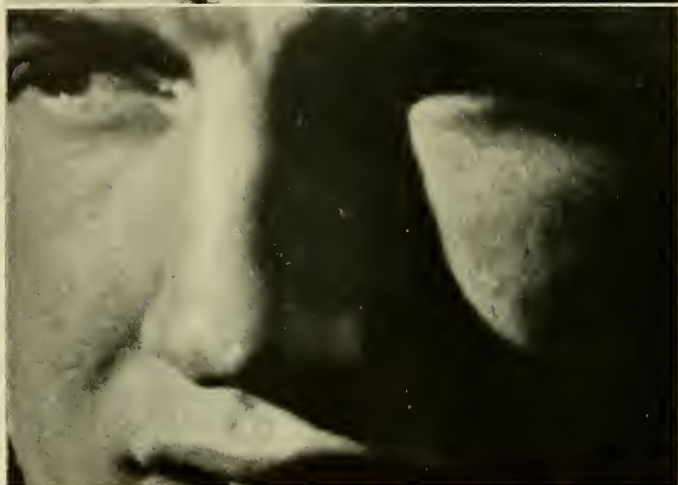
*Upper right, $f:4.5$, $1/25$ second,
P. and H. Process*

*Lower right, $f:11$, $1/200$ second,
P. and H. Process*

Figure 5



DK—20



*P. and H.
Process*

Figure 6. 20 times linear enlargements reproduced same size.

virtues of the P. and H. Process as I have verified them. There are other advantages, but I should only be quoting and that doesn't seem fair to you if I can not vouch for them myself.

1. Greatly improved shadow detail
2. Simultaneously improved highlight detail.
3. Increased film speed (2 to 4 times).
4. Improved detail definition in all parts of the subject.
5. Greatly increased latitude of exposure.
6. Balancing of printing density.
7. Good grain characteristics, excellent with special developers.
8. Marked reduction in halation.

If that isn't enough you must be very hard to please.

Overheard later that week:

* * *

How did you like the article?

* * *

Of course you didn't believe it. I really didn't expect you to, even with illustrations to prove it, that's why I kept urging you to try it.

* * *

You have? What kind of results did you get?

* * *

Is that so?

* * *

Really!

* * *

Yes, I'm still listening.

* * *

It sounds as though you got even better results than I did.

* * *

Now you know why I am so enthusiastic.

* * *

No, I can't tell you that over the phone, it would take too long.

* * *

Yes, there is an explanation, and a good one too. Wait till Mr. Perry's book comes out.

* * *

Don't thank me, thank Mr. Perry.

* * *

Goodby.

Readers are urged to mail in any questions which may occur to them concerning the P. and H. Process. This will help us to make sure that all points are fully explained in Mr. Perry's book. Questions will be answered by letter as promptly as possible.

Equipment for the P. and H. Process is now ready for shipment to dealers.—Ed.

Shooting The Fairs

A t N i g h t

William A. Palmer

THAT the whole Golden Gate International Exposition is a paradise for amateur photographers has been demonstrated from the opening day when it seemed that almost every other person of the 120,000 in attendance had a camera in tow. The amount of finder squinting, shutter clicking, and film winding that was done on that day must surely have caused a warm glow in Rochester and Binghamton. For San Francisco's World Fair has more picture opportunities per square yard than has ever before been assembled on an exposition ground.

There is probably no place else in the world where such a colorful setting for an exposition could be found—the two largest bridges in the world, one a bright red, the other silver colored—blue sky and water—the irregular skyline of hilly San Francisco on the west and the buildings of Oakland and Berkeley nestled against the Coast Range on the east. With such a background, no matter which direction one points a camera, he can get a picture—especially if the camera is loaded with color.

At nighttime the exposition becomes a super-spectacle. The courts in daytime feature fountains and a horticultural display of the first water with flowers, shrubs, and trees displayed against the main exhibit buildings as a backdrop. At night however, the order is reversed and the floodlighted buildings are the feature, with the foliage and fountains furnishing a frame for the picture.

The lighting, the finest that illuminating engineering and \$1,500,000 can produce, has already had hundreds of square feet of black and white film exposed to its reflected rays, for even in tones of black and white, the effects are startling. But the blending of large masses of color is the particular feature of the display and each of the facades presents a different color scheme for the foreground buildings which in turn blends with the Tower of the Sun. This theme tower which dominates the Island at night, is illuminated in the same way from all sides, but the colors used in it are



Gabriel Moulin Studios

Black and white reproduction from Kodachrome Type A 35 mm., exposure 45 seconds at F:8. The building in the foreground is illuminated in deep blue, with touches of flame. This is an example of material which will require slightly more exposure than is called for in the table, because of the low level of the blue lighting. Notice that the Tower of the Sun in the background, which is more brilliantly lit, is slightly overexposed.

such that they harmonize with other building colors no matter from which direction the structure is viewed. The outside of the Tower is colored by rays of yellow, orange and red, while the niches and inner surfaces are in deeper magentas and blues.

If one were to have to decide on the most colorful view of the night effects, probably the south entrance looking into the Court of the Moon would be first choice. Here the coloring on either side is a deep blue with accents of magenta and red. In the foreground are illuminated fountains of white issuing from a pool whose border is outlined in green fluorescent tubes. The trees in the surrounding garden are also illuminated in green and beyond, rising above the deeper colors, is the brilliant Tower. Although every color in the spectrum is represented, their placement is worked out so that the effect is vivid but not garish.

From other sides the main exhibit buildings have other color schemes. The east towers and entrance to the Court of the Flowers are illuminated entirely in shades of yellow, red and orange and when viewed from in front of the Federal building these colors are echoed in the lagoon. It is here that perhaps the most spectacular display of the entire exposition can be seen when nature does her part and puts on a first class sunset out over the Golden Gate. Such was the case on the night of the opening day when a backdrop of red clouds set the scene for the floodlighting to make its debut.

In the Court of the Seven Seas the lighting is less brilliant, the feature here being the long lines of decorative lamp posts representing the masts of windjammers with flying sails. The sides of the buildings are flooded in a weak green light which serves to set off the display of fluorescent paint over the entrances. This fluorescent paint, a new development, is made to glow by the action of invisible ultra-violet rays (popularly called "black light"). The chemicals in the paint are caused to glow much as does the face of a radiolite watch only there are a great many different colors that are obtained by the use of different chemicals. The effect is as if the paint itself were the light source and the iridescent display on the bas-reliefs over the doorways is most beautiful.

In the Court of Pacifica, the lighting is again in a very high level. Here the illumination is from three main sources. Most prominent is the statue of Pacifica herself which is illuminated by floodlights under the water which issues forth at her feet. Behind her is the huge metal prayer curtain made of star shaped stainless steel medallions which are in continual motion. Lights controlled by thyatron tubes continually change the colors on the impressive backdrop. The Fountain of Western Waters which occupies the center of the Court of Pacifica is illuminated by underwater lights which also continually change color through various tones of red, magenta, purple, and blue. Around the walls of the court are also huge standards of light which appear as luminous cylinders 86 feet tall. They are constructed of a treated canvas stretched over steel hoops five feet in diameter and each standard of the 16 in the court has 200 light bulbs in it.

The front view of the exhibition buildings as seen from the San Francisco ferry shows the long plain walls in their natural ivory tint with occasional accents of color in the round windows over the doorways. The Portals of the Pacific with their formalized elephants have their inner



Gabriel Moulin Studios

Reproduction from a black and white negative. The bas-relief above the entrance on the left, makes use of fluorescent paint and ultra-violet light as explained in the text. Shots of these bas-reliefs will require two to three times the exposure called for in the table.

recesses bathed in brilliant red while below are many cylindrical units similar to those in the Court of Pacifica.

Kodachrome Will Record It

Every camera owner will be anxious to keep a record of this night display and therefore it is good news that it can be recorded in full color in Kodachrome stills as well as in movies although the latter takes a little special "finagling." You should take a tripod along the night you intend to take Fair pictures, for short time exposures are necessary. Recently there appeared a piece in San Francisco papers to the effect that tripods were not permitted on the Fair grounds, but we have been assured that this is not an official ruling and that tripods are permitted freely. Incidentally it is interesting to note that while the present Exposition encouraged amateur photography even to the extent of holding contests and furnishing pretty girl models, the 1915 Panama Pacific Exposition demanded a fee of 25 cents for the permission to take a camera inside the grounds. It goes without saying that those who do bring tripods should not set them up or carry them in any way that will cause damage or annoyance, lest the privilege be withdrawn in the future.

Start Working at Dusk

The best time to get night shots is at dusk just as the lights are turned on, for at this time there is still considerable twilight to help exposures out and the evening sky is frequently a display in itself. However, shots taken after natural light has completely gone are also very successful. There will be a question of what type of Kodachrome to use. For the night shots and for those taken later in the evening it is certain that type A is better. At dusk, though the regular daylight emulsion will give the most natural rendering of a sunset colored sky, the type A with its great sensitivity to blue making a red sunset more in magenta and purple tones. If one is not particular about naturalness type A will serve very well.

What Exposure to Use

In determining the proper exposure, an exposure meter will be found to be useless. It is impossible to get near enough to the illuminated parts in most cases, and because of the color sensitivity characteristics of the meters, the reading thus obtained would probably be erroneous. Experiments have shown that the following table will give satisfactory exposures. These settings are for the average lighting conditions, and since not all the courts are illuminated to the same level, they may have to be modified slightly.

*Exposure time in seconds for Kodachrome
shots of the Fair illumination**

Aperture:	f	1.5	2	2.8	3.5	4	5.6	8	11	16
Type A Kodachrome										
35 mm., 16 mm., 8 mm.....	1/2	1	2	4	8	16	32	64	128	
Regular Kodachrome										
35 mm., 16 mm., 8 mm.....	1	2	4	8	16	32	64	128	256	
Type B Kodachrome										
Cut Film	3/4	1 1/2	3	6	12	24	48	96	192	

N.B. No filters to be used.

Exposures for Movies

Obviously from the above exposures, one can see that ordinary movies with the camera running at 16 or even 8 frames per second will not give full exposure on the floodlighted buildings. Shots taken at f:1.5 and 8 or 12 frames per second at dusk will be very presentable, however, with some of the brighter lights showing and the building outlined sharply in silhouette against the evening sky.

To get the scenes after dark on movie film it is necessary to give each frame an exposure equivalent to those shown above. For example, with type A Kodachrome it would be necessary to run the camera at the rate of

**The above table can be used to calculate exposures for black and white. Consider the exposures given for Type A Kodachrome as based on a Weston rating of 12. If you are using a black and white film rated at Weston 24 to Mazda light your exposures would be half of those given for Type A Kodachrome in the table.*



*Dusk: 8 frames per second
(1/16 second) at f:2.7*

*1/2 second
at f:1.5*

*2 seconds
at f:2.7*

Black and white reproduction from 16 mm. Kodachrome taken with Bolex Camera using stop motion release on "Time" position. Exposures as indicated.

1 frame per second to give an exposure of $\frac{1}{2}$ second. (180 degree shutter.) This can be done with cameras equipped with a hand crank and is especially easy when there is a "one to one" hand crank available. The Cine Kodak Special is so equipped and its crank can be slowly turned at the rate of one turn per second to make a scene of reasonable length. The Bolex can be used very conveniently to give short time exposures on every frame by means of its special stop motion lever which can be set to hold the shutter open while the release button is held forward. The Bell and Howell camera with hand crank added can be turned very slowly to get the exposure needed and in the case of the 70 A model, the governor can be cramped past the 8 frames per second position to throttle the camera down to a very slow speed. The Victor can be made to operate at very slow speeds by barely depressing the starting button.

Naturally all movies taken at very slow exposure rates must be made with the camera on a tripod, but another thing must be watched and that is the motion of people who might walk into the scene. With pictures taken at such a slow speed a person walking ever so slowly will appear to be whisked in and out with lightning speed. Therefore it would be well temporarily to cease shooting when someone walks into an obvious position and resume the scene after he has left. The fountains appearing in scenes photographed at very slow rates of speed will appear to jitter around in an unnatural fashion, but these will not be too disturbing.

Frequently there are fireworks displays on the special nights at the Fair and these too can be recorded on Kodachrome. The technique here is to point the still camera up in the sky where the fireworks are exploding and just open the shutter. Do not include floodlighted buildings in the

scene, for the shutter will have to be open for the duration of several different displays to give the best effect. The widest aperture should be used. For movies of the fireworks, the best plan is to run the camera at 8 frames per second and the lens wide open preferably at $f:1.5$ if such a lens is available. A still better effect can be obtained in cameras which will wind backward, by making a double or even triple exposure of fireworks. The movie audience will thereby get the same effect that they would if three times the amount of pyrotechnics had been discharged. It is possible also with either stills or movies, to shoot scenes of just fireworks alone and then double expose scenes of the illuminated buildings in at the bottom. In this case the first shot of the fireworks should be framed so that the bursting displays take place at the top of the frame only.

So take your camera and Kodachrome to the Fair at night and try some shots, they will be somewhat experimental, for the exposure guide above cannot be strictly accurate for all locations. But, starting with this as a basis and keeping a record of the locations and exposures that you use, you can certainly get a fine collection to show the friends back home.

Kodachrome Users Please Note:

Last month, due to a misunderstanding, we stated on page 139 that 35 mm. Kodachrome could be processed in San Francisco. This is not true. All 35 mm. and cut film Kodachrome must go to Rochester for processing. San Francisco can process 8 mm. and 16 mm. Kodachrome, providing the emulsion numbers begin with 4 in the case of Type A, or 3 in the case of Regular or Daylight Kodachrome.—Ed.

Record Photography

Harold G. Grainger, A. R. P. S.

FOR some time it has been my privilege to contribute to this magazine a series of illustrated articles under the comprehensive title, "Pictorialism for Beginners." Picture making with the camera undoubtedly attracts the majority, not only of members of Photographic Societies but of the multitude who, steadily pursuing their recreation without such amenities, rely on Photographic Journals to keep them progressive.

Lately, Record Photography has interested many more camera enthusiasts than formerly, and evidence of the great amount of excellent work regularly turned out is the generous accommodation allotted to contributors to this section at the annual exhibitions of the Royal Photographic Society in London. Just as striking is the support accorded the special classes devoted to survivals of local antiquities; buildings with historic interest as well as "by-gones" of curious customs in Club exhibitions. Groups of workers have combined to place albums or portfolios of record prints, (sometimes prepared in collaboration with members of architectural and

ST WILLIAM'S COLLEGE, YORK, England



Entrance to the Quadrangle prior to restoration in 1933-48 for service



Restored entrance showing doorway to College interior from the Quadrangle

Founded in 1146 to provide lodgings for the London clergy, the Dissolution of Monasteries it became a gentleman's mansion. From the parlous condition into which it had fallen the College was in 1933 rescued and restored. A gift to the Church by a citizen benefactor the building is now the meeting place of Northern Convocation, the centre of Church organisation in the York Archdiocese.

Figure 1

archaeological associations), into the custody of representatives authorities. In the United States, camera clubs have joined with local civic bodies, to produce a book of pictures of their city, in celebration of some anniversary. A particularly good job of this kind was done in Toledo, Ohio, last year.

In addition to the introduction of new avenues of enjoyable employment, interest in record photography provides unparalleled opportunities for adding to one's knowledge of architecture, archaeology, ecclesiology, topography, disciplinary instruments and habits long obsolete, costumes, etc., etc. A compilation of prints, for instance, illustrative of building periods is particularly absorbing. One can commence with good representative local examples and add others as and when they can be obtained. Bear in mind that such parts of buildings as doorways, windows, chimneys and ornamentation almost always embody features peculiar to particular architectural styles. It is partly upon such evidence that experts have to rely in identification. Therefore a series of prints are naturally more valuable if they include, in addition to general views showing the setting of buildings recorded, the above mentioned and other key constructional features.

Regarding apparatus. Almost any camera is suitable; an accustomed one may therefore be all that is necessary. It will probably be fitted with an anastigmat lens. The possession of a shutter permitting, along with other automatic exposures, something in the neighborhood of $1/5$ sec., $1/2$ sec. and

1 sec. is an acquisition, and so is a rising front. Swing fronts and swing backs are luxuries; very helpful where available, but hardly essentials. A high tripod is a big advantage; there are occasions when exposures are obligatory from rather difficult positions. Walls, for example, have occasionally to be over-looked; and exquisite ornamentation which calls for a close-up are sometimes a considerable height from the ground. To cope with special subjects of this class very keen workers, anxious to secure maximum detail, often provide themselves with additional lenses of long focus. As with other refinements these can be added to one's equipment when, or if found advisable.

Perpendicularity of uprights should receive attention; for few things look worse in an exhibition than an otherwise satisfactory architectural rendering lacking this requisite. Convergence of vertical lines in very tall buildings is, of course, another matter; this advice has reference to average buildings, not skyscrapers. It may here be pointed out that with enlarging apparatus embodying a tilting device, a fair amount of convergence can be remedied.

Standard negative-making material, plates or films, are suitable for record photography, though isochromatic and panchromatic varieties (with or without a medium yellow filter on the lens according to the subject) are more generally preferable to those which are not specially prepared for the correct, or almost correct rendering of color. The sparkle and richness of tone which so often arouses admiration in good examples of technical photography is not too difficult to attain if cleanliness in handling sensitive material is strictly adhered to. It will be obvious, of course, that the co-ordination of the negative with the printing process to be employed is of great importance. The ideal is to secure such tone values in the negative as will assure a print exhibiting quality in both shadows and high lights, with a satisfactory scale of intermediate tones. This presupposes a negative without any large areas of clear glass or masses of impenetrable dark tones. Undue contrast should therefore be rigorously avoided.

Anti-halation films give best results. They cut out the possibility of halation which, especially in subjects where dark and light tones are in conjunction, not only destroys the clarity of the image but robs the print of quality in its contours. Smooth surface paper is perhaps most generally popular for this class of work. For exhibition prints a delicate cream paper base is frequently employed with a cream mount. Where explanatory copy is included, (quite a usual practice), it should be brief and to the point, and looks best if neatly arranged in a compact rectangular space on the mount. Far better is it to have no copy at all than that it be clumsily carried out, or so prominently displayed that it detracts from the print. The ideal is probably delicate pen lettering in a grey tone, or penciling. Sets of such mounted prints, especially if finished with the narrow border tone as illustrated, in addition to looking well within portfolio covers, are easily rearranged, if necessary, from time to time as fresh subjects are obtained.

Mention has already been made of series of prints illustrating the development of architecture. Other sets equally valuable from an educational point of view could, I am sure, be got together in any city, town or



KIDDLE HALL, *Yorkshire*

a very good example of a smaller type of 15th Century English Manor House on a 13th Century foundation.

General view of front view on left, the Chapel, dormer with rooflet a chief feature of the building the beautiful embayed characteristically Tudor window.



Features of embattled Banqueting Hall window Gothic pinnacles Latin inscription round the top shields of arms of first owners emblazoned in diamond leaded lights.



In 1928 the centuries-old exterior in fulfillment of a contract of sale, was dismantled for removal & re-erection elsewhere, & a new front (above) took its place.

Figure 2

village. Opportunities in large centers of population would naturally differ in subject matter from what may be available in the country; but there is no reason why both series should not possess great potential value. Alterations in the appearance of important buildings and streets are perhaps not more striking than changes in the countryside where agricultural operations are by no means permanent in mode.

Let us consider a selection of town and country records of this "Then and Now" type from my portfolio of English subjects. The first two (Figure

1) are companion views of the entrance to the quadrangle of a 15th century College prior to and following restoration. It will be familiar to over-seas visitors to York where it was erected in 1460 as lodgings for the Minster clergy. Following its sale at the Dissolution of Monasteries, it became a gentleman's mansion; but from this high estate it gradually declined until it was occupied by very poor folk and partly devoted to stabling for horses. Its purchase and presentation to the Church (it is now the meeting place in Convocation of Archbishop of York, Bishops, clergy and laity) by a generous benefactor was followed by two badly-needed restorations; the quadrangle in 1903-05 and the outer entrance (illustrated) in 1935. The print on the left shows the mouldering Perpendicular period portal after 475 years' weathering; the one on the right, the porch rehabilitated, above which is retained what is left of the original figure of St. William, the patron saint, in a renovated niche. In addition to picturing what has been accomplished in the renovation of this ancient York building, these photographs may be taken as representative illustrations of numerous efforts to restore, as far as may be possible, the ancient glory associated with historic buildings all over the British Isles. Many a castle, abbey, bridge, cottage; as well as market, village or other spot possessing historic, romantic or archaeological interest has, within the last few years, been rescued from threatened oblivion. In addition to a special Government Department accepting possession or sometimes control only, on behalf of the nation, huge sums of money are publicly subscribed to secure these architectural treasures in good repair for all time.

There is not a little sadness associated with illustrations of a smaller type of English Manor House of the 15th century as it appeared previous to and following the uprooting of its fine front for re-erection elsewhere; some believe in the U. S. A. (Figure 2). Though still designated Kiddall Hall, it now looks what it has long been, a dairy farmstead. A detailed photographic record of this old Hall would naturally include the stone sideboard or *beaufet* in the banqueting hall, the interior of the chapel, Tudor fireplaces, close-ups of the ornately sculptured Tudor window and its encircling inscription below the parapet, and last, though not least, the charming dormer in the roof.

It was not, however, only 15th century builders who could produce picturesque examples of architecture, for what could be more delightful than the Jacobean period (1600-1620) gateway giving access to Fountains Hall, erected when King James I ruled England (Figure 3). Until a few years ago nestling rock plants and flowering shrubs were its familiars (upper print); handsome trees partly sheltered its slowly mouldering stones from the inclemencies of the weather. Regrettably, it would appear that under the necessity of preserving the stonework, drastic extirpation of its rarely beautiful setting was imperative (lower print); the time-worn sculptured monogram panel on the left and, on the right, the old sundial of the period are now, however, more clearly seen. As this gateway giving access to the old-fashioned garden in front of the Hall is only a small portion of the estate, it will be obvious that a great deal of photographic work would be available if the handsome house and its contents were properly recorded.



FOUNTAINS HALL

to which this gateway
gives access, was built
in the reign of James I.
Stone was obtained from
the ruins of the abbots
house, Fountains Abbey

During the Jacobean
period 1600-1620 the
magnificence & grandeur
of many mansions were
notable features, hitherto
unsurpassed & not since
equalled.



The beautiful Jacobean period Gateway
prior to *(upper print)* following the removal
of flowering shrubs, rock plants & sheltering
trees, *(lower print)* the last-named having long
masked the Hall from public view.

Figure 3

Amongst the most (to myself at any rate) disappointing changes I remember was the removal some years ago of the fine healthy tree from the center of the court at the back of the well-known Tudor (1500-1560) Staples Inn, Holborn, London (Figure 4). The seat round its base was a particularly friendly gesture, for it long provided welcome rest for tired sightseers and shoppers in this part of the great city. It is the removal of the tree and encircling seat, of course, which has made all the difference,



Figure 4

not only to would-be picture makers but the general public who loved to take advantage of the chance to relax in some degree.

An example of the changes constantly taking place in towns and cities is shown in our next illustration. (Figure 5). Just over a century ago the inhabitants of Hull honored the memory of their great townsman, William Wilberforce, by the erection of a Doric pillar, 72 ft. high, surmounted by his statue. The site selected in days without traffic problems was, not surprisingly, in a principal street. With the advent of the automobile things became, of course, increasingly tiresome, until at last, after much discussion, the removal of the memorial to more suitable surroundings was finally decided upon.

Our final illustrations, (Figure 6), holiday scenes at Scarborough, England's "Queen of Watering Places," show the great changes which have taken place in English dress within 40 years. In 1900, five yards and even more was the width of the bottom of a skirt. In the fall present-day girls are often hatless, (the despair of the milliner) a severe contrast to the oddly-designed millinery worn four decades ago; dresses supersede the old blouse and skirt; coats are fur trimmed. Men's straw hats are now a rarity, soft felt being the popular mode with, as a change when on a holiday, a tweed cap. Such dress changes as are here mentioned generally attract a great deal of attention, not to say amusement; perhaps because many who see the exhibits remember that they too, wore those styles in their day.

To those readers who have the opportunity, a visit to the likeness of a Middle Ages monastery which has been built in one of the suburbs of New York to house the Metropolitan Museum mediaeval collection should provide excellent scope for the dual exercise of their skill in photography and interest in architecture of a particularly beautiful type. It is no exaggeration to say that here the skilled craftsmanship of the glorious Golden Age of Gothic Art is brought to light; transported across the Atlantic from France; surely strong evidence of the interest shown by Americans in such matters.

It may not be inopportune to mention that a friend of the writer's has during the last few years found Record photography so absorbing that it has become his favorite subject. A Fellow of the Royal Photographic



Figure 5

Society, examples of this branch of his work exhibited at the R. P. S. Annual Exhibitions brought him the coveted award of the Hood Medal the first time it was offered. With an assured reputation gained by the consistently high standard of the work to which he is partial, special opportunities to record the features of some of England's most famous buildings—cathedrals, colleges, etc., facilities only rarely granted, are his.

Numerous other photographers have won widespread recognition for their work in Record photography, so those whose interests incline in this direction should not hesitate to follow their bent because of a feeling that their work will not be appreciated. American exhibitions do not pay nearly as much attention to record work as do English shows, many of which have a special section which is judged separately.* They would be quick to do so however if a sufficient demand were made manifest. Record workers in the United States are advised to start a campaign of "letters to the editor."

*In reviving their annual exhibition the Pictorial Photographers of America took a step in this direction which is being carried on this year. Their exhibition is divided into five classes: pictorial, modern, illustration, press and scientific.—Ed.



Figure 6

A Darkroom In A Trailer

Robert G. Silbar*

ANYWAY, there's always room enough to change your mind, if nothing more. At least that was what the Old Photographer said when he was told it was possible to install a darkroom in a space 34 inches by 26½ inches inside a trailer.

Design engineers for trailer companies are used to working in fractions of an inch. Every usable cubic inch of floor space must be devoted to something, because after all the average trailer is contained in 450 cubic feet of space.

Every photographer knows that trailers provide greater mobility for darkrooms than any other known means. Many adaptations of floor plans have been developed so that photographers may have mobile darkrooms, but most amateurs cannot afford a specially designed trailer. Converting a standard trailer model so that a darkroom can be used in the closet, wardrobe, or lavatory of the trailer is something more to be desired. It can be done, with a compact arrangement of all necessary equipment, without a great deal of expense.

Such a darkroom can contain a developing tank, fixing basins, washers, dryers, a contact printing device and a small enlarger. Much of this equipment can be converted from materials now in the home darkroom, so that when the trailerite goes traveling, he can take his equipment along.

The most obvious location for a darkroom aboard a standard model 19-foot trailer is the lavatory room, which on most trailers is largely used

*Covered Wagon Company



Figure 1. In the window directly behind the auto, a darkroom was installed.

for emergency purposes only, thus permitting the commode to be removed from the room. Trailer commodes are portable, anyway. With it out of the way, a space 34 inches deep and $26\frac{1}{2}$ inches wide is provided.

First, take a curtain rod and attach it above the trailer door, and hang a dark, lightproof cloth on it so that the entire trailer door is masked out. This will make the door lightproof and prevent stray leaks of sunlight around the edges.

To mask the window in the lavatory, use a section of Masonite or composition wall board, cut to fit snugly into the window frame, and held there by simple bracket screws. The window mask may have a handle on it in the center, to make it easier to put into place.

With window and door masked out, total darkness is assured. Such elaborate precaution might not even be necessary, if the photographer will work at night in an unlighted trailer.

On the modern covered wagon, the wash basin in the lavatory is a trick arrangement which folds into the wall, out of the way. This feature can be used to advantage to provide more floor space in the darkroom. The surface of the door on the wash basin can be equipped with hooks or clamps, to hold wet negatives or squeegee plate for drying. A tiny six-volt electric fan, set on the floor, pointing upward at the negatives or drying prints, will speed operations and provide ventilation inside the room. Air will circulate out the opening where the wash basin opens, if a drawer in the linen closet adjacent to the lavatory is opened slightly.

The developing tank for either plate or films or cut film, can set on the floor, out of the way, under the enlarger.

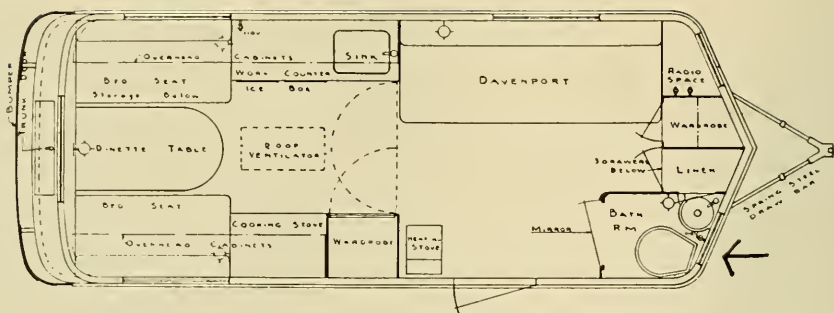


Figure 2

Floor plan de luxe model covered wagon. Arrow indicates space used for darkroom.

A simple folding table, 20" by 12", made out of $\frac{5}{8}$ " plywood or lumber, is attached along the outside wall of the trailer, care being taken to see that the bracket and nails supporting it are driven into a bow of the trailer frame, rather than just into the interior paneling of plywood. This table will serve as a holder for fixing and developing trays.

One section of the table top is cut away for a contact printing box, the box being located underneath the table on a slide so it can be removed. The section of the table top which is cut away is covered with plate glass. A hinged piece of wood, padded on the inside with felt, can be used to hold negatives and photo-sensitive paper over the print box while the light is turned on and the print made. The procedure in building the print box is simple, being similar to the cheap contact printing boxes obtainable at any supply store. It would be easy to adapt such a box for this purpose.

The enlarger is mounted vertically on a steel rod, which, in turn, is clamped directly to the wall of the trailer. The printing surface underneath the enlarger will allow prints up to 8 by 10 inches to be printed with ease. The enlarger can be taken off the supporting rod. The enlarging lens should be of as short focal length as is practical for the negative size.

The accompanying drawings, crude though they are, perhaps illustrate better than words can, just how a complete darkroom can be installed in the trailer lavatory.

For storing photographic paper in a light-proof box, the medicine cabinet in the lavatory can be enlarged by cutting away the back and installing a larger box.

If the photographer is able to afford it, perhaps a specially designed trailer interior would be better for all purposes, as more room could then be provided. One particular floor plan developed by Covered Wagon Company for their 19-ft. model had a special room built across the back of the trailer, with double doors, opening on each side of this back room (Figure 4). A room 6'2" wide by 4 feet long was thus provided. The remainder of the trailer was equipped with accommodations for four persons, and had every convenience of a home.

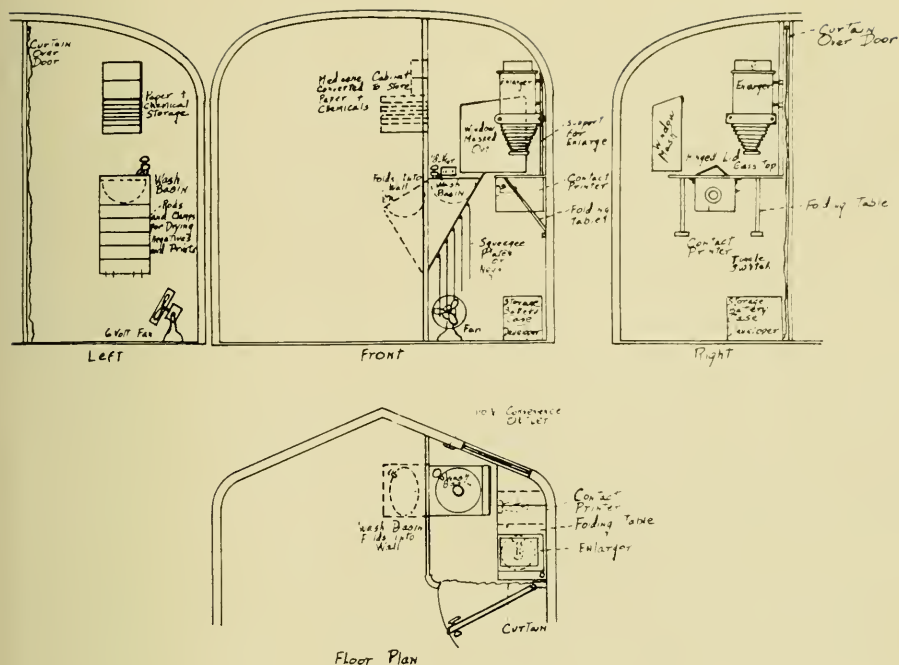
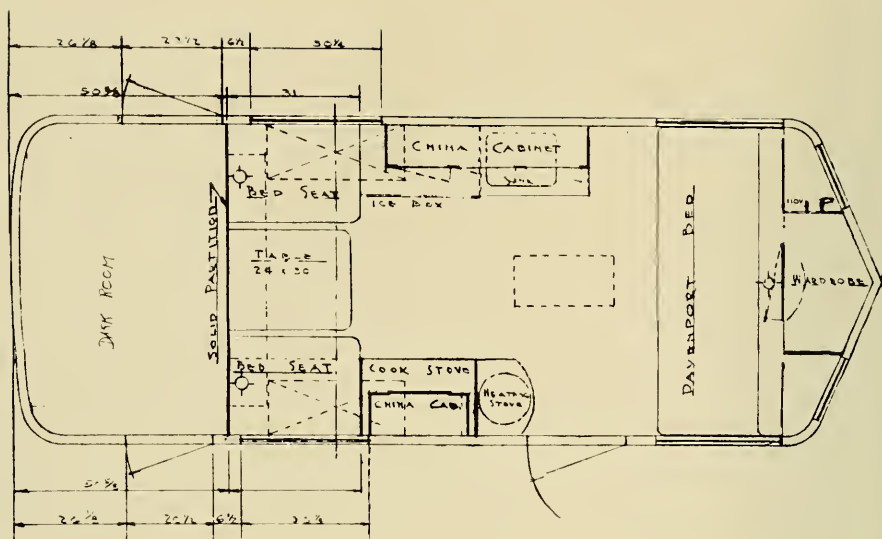


Figure 3

Floor plan and elevations of darkroom as constructed in space indicated in figure 2.

Many newspapers use trailers as mobile photographic laboratories. The Des Moines (Ia.) *Register-Tribune*, for instance, has a "traveling phone-photo studio" which is the ultimate in specialized use. From that trailer, one end of which is a darkroom and the other a wirephoto room, photographs are relayed by telephone connection direct to Des Moines, from wherever the trailer happens to be. In the darkroom itself work-high counters all around the room enable operators to develop and print photos taken in the field within minutes after the shutter is snapped. A 30-gallon water tank is carried to assure a continuous water supply.

Most trailers are equipped with hand pumps, resembling those on yachts, for pumping water. It might be recommended that a small Mercury pump, or rotary pump, be used to deliver a steady stream of water, instead of an intermittent stream, for washing prints. These pumps are operated by electricity, and require only the flip of a switch to start and stop. If the trailer is in a trailer park, connected to 110-volt current, such as would be needed to operate the lights on the enlarger and printing out box, electricity is not a worry. For complete independence from electric light power lines, portable gasoline generators can be carried in the trunk of the tow car.



FLOOR PLAN
TRAVELING PHOTOGRAPH STUDIO
DELUXE 3717

Figure 4

Floor plan of trailer designed to include a 6'2"x4' darkroom and living accommodations for four persons.

These generators can charge batteries, which, in turn, will light the trailer lights.

Speaking of specialized trailer darkrooms, the U. S. Air Corps uses a fleet of trailers equipped for field operations of a wide variety, and used in aerial mapping operations. These trailers serve as mobile field headquarters for mappers. Windowless, they resemble nothing so much as Army tanks. Inside, however, they are marvels of efficient layout. A center door in one side opens into a small vestibule, from which, in turn, doors open into a darkroom used for developing negatives, and into a front room equipped for printing operations. In the trailer are washing tanks of hospital rubber, mechanical agitators and washers and various devices to control water temperatures. The printing room has a rotary dryer, a small contact printer, and other equipment. Forced air ventilation inside the trailers enables pleasant working conditions.

Cinema Section

Edited by

William A. Palmer

Your Movies Of The Fair

H. B. Butler

ONE woman stood with the lens glued to her eye, as she briskly panned the Court of Pacifica. You might live out your life span without seeing anyone taking pictures with the back of a movie camera, but it happened on opening day at the Fair, and deserves first place in the gallery of classic boners.

The usual number of photographers were hard at work with lens caps on their cameras, and doubtless an equal number were making immortal movies without film.

All of which proves the Golden Gate International Exposition a genuine photograpers' paradise — with everything from sights that would make Dauguerre turn in his grave to architectural vistas as advertised. And it's yours for the recording, provided that you use a loaded camera, remove the lens cap, and point the front side forward.

Because the Exposition was definitely planned for pictorial values, it is a photographic "natural." Particularly is it adapted to movies. More particularly to color movies, since color is the dominant note in buildings, banners, murals, lighting, exhibits, and landscaping.

There's something about the place—a different "something" for each person—that cries out for camera recording. To you, it may be the blue and pale gold of a bed of hyacinths and daffodils. To your companion, carnival shots of the Gayway. To a visitor from the East, the palms and desert plants near the Elephant Towers. And to a small boy, the shining phoenix atop the Tower of the Sun, which he sees only when his head is tilted at a right angle to his neck.

Because of its size and variety, the difficulty isn't the usual one of trying to find something to take. Instead it's the problem of finding too much. In case you've forgotten, the Exposition cost \$50,000,000, took a year and a half to build,



Figure 1. Portrait of Pacifica not looking her best.

covers 400 acres of man-made ground, and lists among its incidentals \$1,500,000 worth of trees, shrubs and flowers planted. Photographing the whole thing is a job for the official photographers. Photographing it from your personal viewpoint should be one of the most interesting jobs you've tackled.

In general your movies of the Fair will divide themselves into two classifications—establishing shots and theme shots. This will be true whether you are a vacationist from New York or one of San Francisco's constant visitors to the Island. Whether you use black and white film, or the latest color stock.

Your establishing shots will be those that show the natural focal points of the Exposition—those things that are so large and so spectacular that no one can avoid seeing them. The main entrance, with the Elephant Towers. The Court of Pacifica and the much-publicized Fountain of Pacific Waters. The Tower of the Sun. The Court of Reflections, with the Arch of Triumph mirrored in its quiet pool. A view of the Federal Building, taken from across the lagoon. And so on. Your theme shots will represent your personal interests—murals, flowers, trees, people. They'll depend on what you yourself like.

At the moment, the establishing shots may seem too obvious, and too over-photographed to warrant the time spent on them. Not so later. They are the highlights of the Fair, and the bases of the completed plan of landscaping and architecture. As such you will remember them, just as people today remember the famed Tower of Jewels, which was the keynote of the Panama Pacific Exposition in 1915.



Figure 2. The Tower of the Sun leads the eye upward. Lines indicate the approximate regular movie lens field.

Try to make them into clear, explanatory views, based on **WHERE**, **WHAT**, and **HOW BIG**, which are the first impressions of the average fair-goer. The architects themselves are your allies here. Long vistas lead to the focal points. Lesser buildings (only eight stories high) provide contrasts. And now that the Fair is open, the ant-like crowds emphasize the height of the structures.

Take time to frame your picture. Include enough contrasting detail to show size, without diverting attention from your objective. Hold the camera straight, so that impressive vertical lines won't slant on the screen.

A good view of the Tower of the Sun can be shot from the Court of Pacifica, but more spectacular is the one from the south, with the Court of the Moon and the Statue of the Evening Star in the foreground. Before the officials inconsiderately ordered the fountain in the South Garden turned on, it could be obtained from the Yerba Buena end of the Island. Now it's harder. If you move your camera to one side, so that two thirds of the Tower won't be concealed by spray, you'll find the 400 foot perch of the phoenix dwarfed by the fountain in the foreground.

Frame as much as you can from the southern end of the Court of the Moon, and be content with it. You will find a wide angle lens most useful, for the regular lens does not take in enough of the tower and large buildings from many available vantage points. If you can't get back far enough to include the entire structure of the tower in the view finder and if you can pan slowly and



Figure 3. Palms establish the size of the Elephant Towers.

steadily, focus your camera on the fountain and statue at the Tower's base, and let the lens travel upward to a climax of the golden phoenix against a blue (we hope) sky. Don't pan unless you have a definite purpose. In this case it's to show the beautiful height of the Tower, which is emphasized by a well-executed pan beginning at the base and ending at the bird.

Above all, don't pan up, down, and around as if you were spraying insecticide. Go in one direction only, and let that direction be the one decided for you by those who designed the fair. If you notice which way your eyes naturally travel, you can't miss it.

With "pine tree" architecture, in which the lines rise to a point, the eyes tend to go up. In this classification belong the Tower of the Sun, the famous Gothic cathedrals, and the Pyramids. Also the small wooden church, whose spire serves a dual purpose as bell tower, and as a means of lifting the eyes of the congregation from earth to heaven.

If you are in an experimental mood, you might try a pan downwards, beginning with the phoenix and ending with the fountain. Don't expect to be satisfied with the result. It will lack dramatic value, since the pictures will be progressing in the opposite direction from that which is normal to the eyes.

Use horizontal panning in those sections where horizontal planes make the eye travel from one side to the other—such as the group which centers the Federal Building, with the broad lagoon in the foreground. Pan from left to right, and know when to stop.



Figure 4. The Arch of Triumph as seen from the Court of Reflections.

But don't pan at all unless you're sure of doing it steadily. Jiggling just isn't aesthetic.

Pacifica's portrait can be obtained from within the entrance to her own court. But if you frame your picture so that one of those husky, full-fleshed Fountain of Pacific Waters statues is in the foreground, the Goddess may not look so tall, and benign and angular as she should. Instead she's apt to appear petite, and sulky or flirtatious according to the way the shadows fall. (Figure 1.)

Your best stance for taking the Arch of Triumph is just behind the small gilded statue in the Court of Reflections. A view from the opposite side will give you garbled composition. You'll be looking through the Court of the Flowers, at and through the Arch, with the Tower of the Sun coyly topping the conglomeration.

Perhaps you are wondering what you'll do with the establishing shots once you've made them. If you dislike that sort of thing, you can seal them in a can, keep them simply as record shots, and trust that you'll be glad to have them later. Or you can use them in editing and organizing your complete series of Treasure Island movies. One of the best amateur travelogues I've ever seen was made by an I-love-only-Browning English teacher. She photographed churches. Not with a movie camera, but with a camera to make slides. However, she organized her material thoroughly, and took clear pictures. In her approach shots she showed the exterior of the church and a glimpse of its surroundings. Then a closer view of the building featuring the details that were old, odd, or beautiful enough to be interesting. Next a view of the doorway, and once inside, she went

to town on architectural wonders wherever she had enough light. Similar use could be made of your establishing shots.

But the real fun in photographing the Fair comes when you make your theme shots. First, select a theme that genuinely interests you. And be sure—unless you are a hermit—to take and edit your pictures well enough so prospective audiences will enjoy them. Are you interested in murals, character studies, flowers, statues, or carnival shots? Treasure Island has them all. A full reel could be made of the expressions on the statues' faces, as the shadows fall on them humorously or grotesquely. A sight-seeing tour of the Fair could be made from the seat in the elephant train, letting the train do your panning for you. But be careful of bounces and a hand-held camera. And there's enough personality material even for a Gluyas Williams movie of other camera fans.

Create your mood, whether it's that of hurrying crowds or of pastoral serenity. Of beauty or of humor. If you're in search of beauty, there are a thousand enchanting corners waiting for you. If your interests are general, condense your material through groupings. Use suggestion and selection as an artist would in a painting.

You will be limited only by the light range. Believe your light meter when the reading taken close to a subject indicates a low level of illumination even though the walls of the buildings seems so brilliant to your eyes. You'll have a hard time photographing the gorgeous colored lights that flame against a black night sky without special technique, but it can be accomplished as a "stop motion" job with the aid of a tripod or other firm support. Night shots are discussed fully in another article in this issue. Just in case you're ambitious.

Outdoors during the day, you will have all the light you need. Sunshine, if you wait for it to strike the angle you want, and on days of high fog, the strong, shadowless lighting perfect for color pictures.

Your choice of black and white, or colored movies depends on your personal preference. In black and white you can attain your usual excellence—capturing the restlessness of fountains, the bustle of crowds, the grace of trees and flowers and the contours of the buildings and sculptures. But the Fair was designed as a symphony of color—even a year-long schedule of harmonious flower blooms has been planned. Color is everywhere, and it is impossible to make a completely satisfying movie of the Exposition without it. If you've not used it before, be sure to have enough light on your subject, and remember that the interesting shadows, which lend variety and softness to black and white photography, detract from the charm of color. In most cases they just look black.

Going back to opening day, the crowds rushed in (as you know if you were among them) like excited children who wanted to see all that there was to see at once. Photography was being practiced in the same haphazard fashion. A shot of this. A view of something else too good to miss. Hurry on. There's a new lagoon, another fountain or statue around the next corner. . . .

The results in movies must have been a hodge-podge in which Aunt Martha changed into the Statue of the Evening Star with frightening speed. Fun to make at the time, and if cleverly edited, amusing impressionistic films. But now that the excitement is over, even the most casual sightseers are realizing that the Fair's fantastic beauty was the product of meticulous planning. And the most whimsical movie makers realize that the same meticulous planning and care is necessary to make an adequate movie of the Fair.



"Early Morn"

Guy Jaconelli, Wheaton, Ill.

First Award Advanced Class

■ Mr. Jaconelli has succeeded admirably in capturing the atmospheric qualities of the early morning in this print. His composition is beautifully planned. There is a strong center of interest in the larger group of trees. The weight of the trees and barn are balanced by the brush on the right. The sky fits into this structure exceptionally well. The cast shadows lead the eye toward the trees, from there it skips to the barn, then takes a gambol about the sky and returns via the clump of brush on the right, to repeat the performance. The reader will notice, with careful inspection, a set of footprints that enter the picture at the lower left and swing through the picture in an S curve ending up at the larger group of trees. It seems to us very fortunate that these are not more strongly shown. The picture does not need such a line. In addition, the "S" curve has been laid out so perfectly that it appears as an obvious subterfuge. There is nothing in the landscape to suggest such a course of travel, consequently, when we see these footsteps, we think of the photographer and the composition books, and the illusion which the picture is intended to create is destroyed. Fortunately, this does not happen, because the line is subdued and does not readily catch our attention.

Data: ½ sec. at F:16, on Pan film; 11 x 14" chloro-bromide print.

Second Award

Advanced Class



"Unconvinced"

Thomas Welles,
Glendale, Calif.

mush. On the other hand, both photographer and observer should realize that sharp focus alone will not produce the exaggeration of skin texture that is so often objected to. This result is obtained when sharp focus is combined with a lighting which emphasizes texture. The present print serves as an example of good, realistic portraiture. Skin textures are rendered just about as the eye would see them.

Data: 4x5 Speed Graphic; 13.5 cm. Zeiss Tessar; Open flash by No. 1 Wabash Superflash in reflector; Agfa Superpan Press in Welles Middletone formula; 11x14" print on E. K. Illustrators Special, in M. Q. Shadows were "opened" by placing subject near light-colored walls.

■ There has been a good deal of controversy about the degree of sharpness which is desirable in portraiture. In general, amateur photographers have been more reluctant to work for good definition in portraiture than in other types of subject matter. As is so often the case, the argument has been confined, for the most part, to technical procedure (i.e., sharpness vs. diffusion), and consequently seldom gets down to the crux of the matter. The artistic aims and ideals of the photographer; the esthetic content of a given picture, are the important considerations. If the photographer knows what he is striving for in his finished print, such details as the degree of definition advisable become obvious. If, for example, his principal aim is to flatter the subject, some diffusion will probably be required. If the photographer wants to treat his subject in realistic fashion, if he wants to play up "photographic beauty," he will need to work fairly sharp. Diffusion must be used with restraint or the result is

Third Award

Advanced Class



"Shadows in the Canyon"

Thomas B. Noble, Jr.
Indianapolis, Ind.

should face diagonally to the left, of course. With this as our visualized ideal, we can see that there are now too many horses, shown too large, and that the figures are entirely unnecessary. This is particularly the case when the figures have turned their attention in on themselves, instead of toward the distant landscape.

Data: Rolleiflex; Agfa Superpan Press in Champlin 15; 11x14" bromide print, sepia toned.

■ This picture has a nice quality of sunlight, and it does tell the story of a vacation episode very nicely; as a composition, however, it leaves much to be desired. The landscape itself is nicely seen; it is the horses and figures in the foreground that cause the difficulty. All we really need in the way of a foreground accent point is something to balance the dark tones of the cliffs on the left. A single horse, with rider standing at its side, would be ample. This should be placed in the lower right, farther into the picture, than are the horses at present. The horse and rider

Fourth Award

Advanced Class

■ At the risk of being even more incomprehensible than usual, we want to speak briefly of the psychological effect of this picture. As is plainly shown by the title, Mr. Rex was impressed by the sunny aspects of the scene. He gets a bright, airy, warm feeling from the picture—in short, the emotions engendered by sunshine. The sunshine is there, alright, and the picture is nicely arranged, but, somehow or other, we can't seem to react to it in quite the same way as is suggested by the title. To us, there seems to be a heaviness, a somber quality to the picture, which suggests quite a different mood. Apparently the large masses of dark tone, and a suggestion of mystery in the deep shadows under the trees, are responsible for this reaction. We wonder if there are others who see the picture this way.

Data: Zeiss Super Ikonta B; F:2.8 Zeiss Tessar; 1/50th sec., at F:8, on Agfa Superpan in Buffered Borax; 10 x 12" print on E. K. Vitava Projection, in amidol.



"Sunny Moment"

Ralph Rex,
St. Louis, Mo.

Fifth Award

Advanced Class

■ This material presents a very difficult problem in composition. As things are, the eye follows the line formed by ice-against-water, in from the lower right and up to the corner of the breakwater. There is then a grave danger that it will continue to the left, along the breakwater, and on out of the picture. This picture needs two things to strengthen the composition. First, something to check the directional force of the horizontal line, and, second, greater concentration of attention upon the material in the lower right-hand two-thirds of the print. We can accomplish these two objectives by trimming from all sides. There would then be no space above the breakwater or to the right of the corner of it, with corresponding amounts trimmed from the left and the base. Such a trimming destroys the feeling of movement and over-simplifies the picture to the point where there is almost nothing left. The only real solution would be to have some object, of as neutral a character as possible, at the upper left edge of the print, which would interrupt the horizontal line of the breakwater, and thus check its directional force. We could then trim down from the top, to a point just above the breakwater, and in from the left a corresponding amount, and, in that way, obtain greater concentration of interest where we want it.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ " Voightlander Superb; 1/50th sec. at F:8, on Agfa Superpan Press; 8 a. m., dim sun; 11 x 14" print on E. K. Kodabrom, 10 x enlargement.



"Shore Ice"

R. W. Chabot,
Chicago, Ill.



"Shy Pastures

Roi Partridge, Oakland, Calif.

First Award Amateur Class

■ Roi Partridge, as most of our readers will know, holds an enviable position as an etcher, and an art instructor, and is well known for his work in other mediums as well. Now that he has taken up the camera, we observe the results with much interest. This is the second of his pictures to be reproduced in this department, and we take this opportunity to notify him, that he will henceforth compete in the Advanced Class.

The present print, we feel, is one of those things which speaks for itself. Lovely cloud forms, beautifully photographed. The reader will, of course, appreciate that just any old clouds will not make a picture. Notice the subtle variations of size and shape here. Notice that there is a gentle, but unmistakable, diagonal movement throughout the cloud form as a whole. Notice that there is a definite point of emphasis—the more open part in the left third of the print. It takes all of these qualities to make a cloud that is interesting and pleasant to look at. It is the photographer's task to learn to look for, and recognize, such qualities. One of the judges felt that there should be more of the trees shown. We can not agree that this is desirable. The trees act only as a base in support of the sky. To our eye, they now have plenty of weight to perform that function. Also, it is important to keep the trees as small as possible, because the higher they reach up into the print, the more they tend to reduce the size of the sky. If we were to add very much to the trees, we would quickly lose the feeling of great space, which is now so deftly suggested.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " film size; 5" Bausch & Lomb Protar; $\frac{1}{5}$ th sec. at F:64, on Defender XF Pan in ABC Pyro; 4 p. m.; 8 x 10" print on Agfa Brovira glossy, hard; in Amidol; not ferrotyped.

Second Award

Amateur Class

■ There are a lot of nice things that one could say about this picture. The snow texture is superb. The composition is delightfully simple and is built around a leading line that is both strong and exciting. Notice two things about this leading line. First, after it has carried the eye well up into the picture, its forcefulness diminishes, so that it releases the eye gently. Second, the line does not end abruptly and there is enough suggestion of its extension so that the imagination can follow on around the last visible bend in the stream. These are two important characteristics of the ideal leading line, which should be ardently searched for. The small islands of snow in the stream, act as stepping stones, along which the eye may start downward, for a repeat performance, after the first trip has been completed. Observe how nicely placed these are for that purpose. The large expanse of dark water is a bit monotonous. This can be overcome by printing to bring up the tonal variations and detail which is in this portion of the negative.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; 1/90th sec. at F:11 on E. K. Panatomic cut film in DK-20; Aero 2 filter; 11 x 14" print on Gevaert Novabrom glossy, in D-72.



"The Brook"

Fred Herrington,
San Francisco, Calif.

Third Award

Amateur Class

■ Here again, we find a print with excellent snow texture. Notice how the clarity of the photographic rendering suggests the sharp, crisp atmospheric quality of a bright winter day. As we look at this picture, we feel that there is some danger of the eye becoming entangled in the brush in the left foreground. An unusual effort must be made to get around this and on to the point of principal interest—the snow-topped building. This situation could have been overcome by moving the camera to the right. The new camera angle would give us more space between the two large trees on the left and the building. That is all to the good, for with the building farther to the right in the picture space, we can exclude the brush in the left foreground and place the two large tree trunks close to the left edge of the print. This would achieve the simplification desired.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ " Korelle Reflex; $\frac{1}{2}$ sec. at F:22 on Agfa Super Plenachrome, in GDX; late afternoon; $6\frac{3}{4} \times 8$ " print on Agfa Brovira glossy, hard.



Marion L. Partridge
Oakland, Calif.

Fourth Award

Amateur Class



"Tall Corn"
W. Oberlin,
Ventura, Calif.

■ This picture serves as a good example of how to pick out an interesting bit from what must have been a confused welter of material. Notice the principal elements. One dominant object (the tallest stalk), repeated in lesser degree by shorter stalks. A variation from the vertical theme supplied by the curving leaves, also repeated. A compacting of material at the bottom of the print which suggests a base in support of the structure as a whole. To appreciate how important this base is, in finishing off the picture, just imagine how skeleton-like the picture would look if the bare stalks carried down to the base of the print with nothing but the sky behind them. The filling in of the lower part of the print with fairly compact and substantial tone is most important to the success of this composition and is a factor which is quite often neglected when material of this kind is photographed.

Data: 9 x 12 cm. Voigtlander Avus; 13.5 cm. Skopar, F:4.5; 1/50th sec. at F:18, on Agfa Superpan Press in Agfa 17; Zeiss dark yellow filter; 7:30 a. m. in August; 11 x 14" print on E. K. Kodabrom No. 3, in D-72.



"Black Manhood"
C. Stanton Loeber,
San Francisco, Calif.

Fifth Award

Amateur Class

■ It seems to us that Mr. Loeber has posed his subject with good judgment. Notice the treatment of the neck-line on the left. This neck-line is unusually straight, and shown as it is in relation to the jaw it suggests muscular strength and alertness. It does much to help put across the idea which the photographer is trying to bring out. Definition falls off slightly in the parts nearest the camera. Sharpest part of the print is the model's left eye. In this case, we feel that all-over sharpness would be desirable. As a general rule, it is better to have the focus fall off in the more distant parts of the picture, when differential focussing is used.

Data: 3 1/4 x 4 1/4" Popular Pressman; F:3.4 Aldis; 1/60th sec. at F:8, on Agfa Isopan; 11 x 14" chloro-bromide print.

Monthly Competitions

Scoring for Club Trophy Cups

The following won points for their clubs in the Advanced Class: Ralph Rex, for The Camera Clique; Guy Jaconelli and R. W. Chabot, for the Fort Dearborn Camera Club; and Thomas B. Noble, Jr., M.D., for the Indianapolis Camera Club.

The following won points for their clubs in the Amateur Class: C. Stanton Loeber, for the California Camera Club; and Fred Herrington, for the E.P.I.C. Pool of San Francisco.

The following prize winners have no club affiliations: Thomas Welles, Roi Partridge, Marion L. Partridge and W. Oberlin.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)
 Calgary Photographic Society (Canada)
 California Camera Club (San Francisco)
 Camera Art Club (New Westminster, Canada)
 Camera Art Group (Bombay, India)
 Camera Clique (St. Louis, Mo.)
 Camera Club of Richmond (Va.)
 Charlotte Camera Club (N. C.)
 Cleveland Camera Clique (Ohio)
 Cleveland Camera Guild (Ohio)
 Cleveland Photographic Society (Ohio)
 Corona Camera Club (Calif.)
 Dallas Pictorialists (Texas)
 Denver Lensmen (Colo.)
 Detroit Miniature Camera Club (Mich.)
 E.P.I.C. Pool of San Francisco
 Florida Camera Club (Tampa, Fla.)
 Fort Dearborn Camera Club
 Fotoklub Ljubljana (Yugoslavia)
 Fotoklub Zagreb (Yugoslavia)

Indianapolis Camera Club (Ind.)
 Jefferson City Camera Club (Mo.)
 Knickerbocker Village Camera Club
 Knoxville Camera Club (Tenn.)
 Lexington Camera Club (Ky.)
 Los Angeles Camera Club (Calif.)
 Marin Camera Club (San Anselmo, Calif.)
 Midwood Camera Club (Brooklyn, N. Y.)
 Photographic Society of San Francisco
 Photo Pictorialists of Springfield (Mass.)
 San Diego Miniature Camera Club (Calif.)
 San Jose Camera Club (Calif.)
 Shorewood Camera Club (Milwaukee, Wisc.)
 Sierra Camera Club (Sacramento, Calif.)
 Sonoma County Camera Club (Guerneville, Calif.)
 Springfield Photographic Society (Mass.)
 Taft Camera Club (Calif.)
 Utica Camera Club (N. Y.)
 Washington Pictorialists (D. C.)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	23
Indianapolis Camera Club.....	11
Pictorial Photographers of America.....	6
Fotoklub Ljubljana	4
Fotoklub Zagreb	3

Small Clubs Advanced Class

The Pack Rats.....	4
The Camera Clique.....	2
Aluminum Camera Club.....	1

Large Clubs Amateur Class

California Camera Club.....	4
Indianapolis Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool	12
Dallas Pictorialists	7
Florida Camera Club.....	2
Midwood Camera Club.....	1
San Jose Camera Club.....	1

Cash Awards in 1939

In response to what appears to be the wishes of the majority, Camera Craft is now offering monthly cash awards for the first and second prizes in each class instead of the medals and merchandise orders heretofore given. The amounts will be \$10.00 and \$7.50 in the Advanced Class. \$7.50 and \$5.00 in the Amateur Class. A year's subscription will be given for the Third, Fourth and Fifth awards in each class. With the above exception the rules and conduct of these competitions remain unchanged.

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Correspondence*

Letters

Dear Sirs:

Congratulations on resuming your correspondence column in *Camera Craft*.

Such a column cannot, of course, be maintained by the editor himself. He must have the cooperation of the photographer or the column do a fadeout. However many amateur photographers are also lively writers and all are full of ideas. I am sure that hundreds of your "customers" will welcome the opportunity for exchange of ideas which letters, concisely worded and to the point, will afford them.

Most sincerely yours,
Jack Wright.

Weston

Dear Sirs:

. . . Weston's articles are fine; just as Weston is. I look forward to the next one.

Cordially,
David R. Craig.

Dear Sirs:

. . . Incidentally I enjoyed Mr. Weston's article on "Purism". It shows a breadth of vision refreshing these days . . .

Yours very truly,
J. Ghislain Lootens.

Dear Sirs:

Many thanks for Edward Weston's articles. The pictures are grand too. Hope you will bring more such stuff . . .

Sincerely yours,
Robert Janssen.

Tripe?

Dear Mr. Young:

For some time I have been intending to write to you about the comments which appear under your prize pictures each month.

If I am correct in thinking that you write these comments yourself, then you are to be congratulated.

Your readers could throw away all the rest of the magazine but if they would read and ponder your print criticisms they would have more than their money's worth.

Of course, it is not absolutely necessary for them to throw away the rest of the magazine. Even a harsh old critic like

myself frequently finds many things of interest in the articles—though I could do with a bit less of the f64 tripe.

Sincerely,
Benjamin Wallace Douglas.
About Salons

Dear Sirs:

I intend to enter a few prints in the San Francisco International Salon, to be held in the De Young Museum, among them the landscape hung at the Invitational Salon. Of all the stupid rules ever created by salon committees, the one specifying 16 x 20 vertical mounts is the limit. It is impossible to mount a landscape size 11 x 14", a size not too large for a grand landscape, in this fashion, without completely spoiling the effect. The function of the salon is to show photography at its best, and the print that is improperly mounted is better left out.

Of course, the committees are like sheep in following each other in writing rules, and the present modern craze is bad enough. Add to that, bromide enlargements, all of standard size and 16 x 20 vertical mounts, and what have you—the **industry of photography**—quantity and not quality.

The decline of photography as a fine art is more apparent today than at any time since David Octavius Hill and Gertrude Kasebier's days.

To go on with the salons, no doubt they are doing us a favor by taking our dollar and to hell with your effort. There are only three or four salons left that I care to send prints to, and this epistle is really meant to help the fine art of photography and the fine print maker.

This summer, I shipped a set of prints to the first Bar Harbor Salon, entry blank and rules, which I am enclosing, show that prints are to be returned prepaid. I received mine, express collect, never saw a catalog nor any announcement of the cash prize winners; wrote a letter to the exhibition committee and received no answer. Have had other experiences that left a bad taste. There are too many salons, and a way

* Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

will have to be found for a National Salon that can travel from one museum to the next, similar to the Ottawa Salon.

Sizes of salon mounts should be 14 x 17, 16 x 20, 18 x 22. Regardless of what the jury does to my prints, I would like you to compare this mounted landscape with the "Peace On Earth," hanging in your office, and I am sure you will agree with me. No doubt the juries, as a whole, are doing a nice job, but I have seen photographers, repeatedly on juries, whose work does not qualify them for anything.

Of course, in these days of high pressure and loud-mouthed press-agentry, the boys who can see the dirt and dramatize it, and blow their own horn besides, are the big shots that are pulling photography their way.

With kindest regards,

Walter P. Bruning.

Camera Craft queried the Bar Harbor Salon, received no reply.—Ed.

Dear Sirs:

Thank you for sending me Mr. Bruning's comment, concerning mounting restrictions for the San Francisco International Salon. It seems to me, that there is much justice in his complaint, and I will see to it that this matter is brought to the attention of the Salon Committee next year.

Sincerely,

C. Stanton Loeber.

"Law of Inverse Squares"

Dear Sirs:

In the interests of good photographic practice I should like to call your attention to a mistake in the February issue of Camera Craft Magazine, page 93, the eighth question under the heading, "What is your photographic I.Q.?" The question reads, "... It is not necessary to increase

the exposure time as the distance between the subject and the camera increases." On the answer list on page 96 you list that statement as true, suggesting that the reader try it in a practical experiment. But the statement is false, and depends on a basic photometric law which states: The intensity of light from a given source varies inversely as the square of the distance. The source may be direct, as a photoflood bulb, or it may be indirect, as in the case of an illuminated subject, but the law remains in effect. If you had a subject four feet from the camera, and found that the correct exposure was, say, a hundredth of a second at f:5.6, and then if you moved away to a distance of eight feet, an exposure four times as great would be required for the same amount of light to enter the lens from the subject, or a twenty-fifth at f:5.6.

That I should choose so small a thing to criticize should tell you something about the quality of your magazine. I find the articles by Edward Weston of unusual interest, particularly his creed of simplification. Your monthly competitions receive an extraordinary quality of work, and the whole magazine is very pertinent to the intelligent amateur.

Sincerely yours,

Larry Conrad.

The answer as given is correct. The "law of inverse squares" applies only to the distance of the light source from the subject. It does not apply to distance of camera from subject. Space prevents a full discussion but if the photographer will think of his lens as the light source when considering the effect of camera distance on exposure he will quickly see that as the camera is moved away the lens moves closer to the film and the image becomes smaller. These factors offset diminution in the intensity of the light.—Ed.

Club Notes

Forthcoming Exhibitions

Third Annual Salon of the Chicago Camera Chemists. Address C. E. Schaar, 754 W. Lexington St., Chicago, Illinois or G. Wilson Thomas, 210 W. Hickory St., Hinsdale, Illinois. Closing date April 18, 1939. Entry fee \$1.00 for six pictorial prints (including candid and portrait), and 50c for four scientific prints. May 1 to 31, 1939. Open to chemists not engaged in a professional capacity.

Fifth Blossom Festival Salon of Photography. Address W. H. Mitchell, 614 Broad Street, St. Joseph, Michigan. Closing date April 19, 1939. Entry fee \$1.00, limit 4 prints. May 7 to 15, 1939.

Third Annual National Photographic Salon for Women. Address Doris W. Heller, Salon Secretary, Architects Building, 17th and Sansom Sts., Philadelphia, Pa. Closing date April 20, 1939. Open to women photographers only. Entry fee \$1.00, limit 4 prints. May 6 to 21, 1939.

Second National Memphis Salon of Photography. Address Memphis Salon of Photography, Brooks Memorial Art Gallery, Memphis, Tennessee. Closing date April 24, 1939. Entry fee, \$1.00; limit 4 prints. June 1 to 30, 1939.

Western Photo Show, sponsored by the Los Angeles Camera Club. Address Los Angeles Camera Club, 2504 W. 7th St., Los Angeles, California. Closing date May 1st, 1939. No entry fee, but postage must be enclosed for return of prints. Limit four prints for each division. Divisions: pictorial, portrait, illustration, candid, documentary, color, scientific, miscellaneous. Competition is limited to those residing West of the Mississippi River. May 19, 20 and 21, 1939.

Fourth Anthracite Photographic Salon. Address Miss Elizabeth Taylor, Salon Director, Everhart Museum, Scranton, Pa. Closing date May 1st, 1939. Entry fee \$1.00, limit four prints. May 13 to June 3, 1939.

Eighth Detroit International Salon of Photography. Address Secretary Detroit Institute of Arts, Detroit, Michigan. Closing date May 17, 1939. Entry fee, \$1.00; limit 4 prints. June 6 to 30, 1939.

Sixth Annual and Third International Photographic Competition and Salon. Address Marshall Field & Co., Chicago, Ill. Closing date May 19, 1939. Entry fee \$.50, limit four prints. Three divisions: Candid, Amateur and Advanced Amateur. Pictures will be exhibited beginning June 9, 1939.

Second Annual Salon of Photography, Lititz Springs Camera Club. Address Carl B. Workman, Secretary, Lititz Springs Salon, Lititz, Pa. Closing date June 15, 1939. Entry fee \$1.00, limit four prints. July 4 to 15, 1939.

The San Francisco International Salon will be exhibited at the de Young Museum, in San Francisco, California, from April 2nd to 30th, inclusive. This fine show, sponsored by the California Camera Club, will be an event residents of the Bay Region and visitors cannot afford to miss. It has been reported that a fine group of prints has been submitted and it is certain that a brilliant show will be hung.

Twenty-five prints by Edward Weston are being exhibited in Sacramento, California, during March. The exhibition is

being held at the Crocker Galleries, directed by Mr. H. N. Pratt.

The University of California extension division announces that courses by P. Douglas Anderson, F.R.P.S., are now being given in San Francisco and Oakland. Registration period will continue through the first two meetings of each course.

In San Francisco, Mr. Anderson will give courses in Miniature Cameras, (Monday evenings at 7, beginning March 20); Pictorial Photography (Thursday evenings at 7, beginning March 23); and Darkroom Technique (Tuesday evenings at 7, beginning March 28). All San Francisco courses will be given at 540 Powell St.

In Oakland, Mr. Anderson will teach Miniature Cameras (Wednesday evenings at 7, beginning March 29) and Pictorial Photography (Friday evenings at 7, beginning March 24).

Oakland courses will be given at 1730 Franklin St.

The extension division also announces that Mr. Anderson will conduct two six day field trips this summer in Yosemite Valley to study landscape photography. Routes for each trip will be chosen to avoid duplication so that students can enroll for both sections if they wish. Section one will be held from July 10 to July 15; section two from July 17 to July 22. Further details concerning the field trips will be announced later.

Notes and Comments

The Mortensen Abrasion-Tone Kit. We have received many requests for a source of supply for the materials necessary to the Abrasion-Tone Process, described in William Mortensen's book, "Print Finishing." The materials are now available from one source and conveniently packaged in the Abrasion-Tone Kit, and all the articles have been approved by William Mortensen. Everything necessary to Abrasion-Tone Process is included, and the price is \$4.00. Write the Oxford Products Co., Beverly Hills, Calif., for complete details, or see the kit at your local dealers.

The latest film speed values for your Weston Exposure Meter are now available

in a handy little pamphlet being distributed free by the Weston Electrical Instrument Corporation, of Newark, N. J. Speed ratings are based on the processing recommended by the film manufacturer. All types of film are covered, including color films. Write the above address for a copy, or you can obtain one from your local dealer.

The International Photographic Prize Competition for owners of Rolleiflex and Rollei-cord Cameras, will offer 500 prizes. Closing date for entries is August 31st, 1939. Write to Burleigh Brooks, Inc., 127 W. 42nd St., New York City, American representatives for the Rolleiflex and Rollei-cord Cameras, for entry blanks, which give complete details on the conditions of entry.

The Morgan Camera Shop, 6262 Sunset Blvd., Hollywood, Calif., are featuring a series of exhibitions of fine photographs in their new store. Currently they are showing 100 prints by Don K. Oliver, made on the popular Charcoal Black Paper. It has been reported that this show will be exhibited at the MacCallum Store, in Philadelphia, during April and will appear later in New York. At the Morgan Camera Shop this show will be followed by a demonstration of the entire Zeiss line of cameras and accessories, including 50 prints taken with Zeiss Ikon Cameras. The Morgan Camera Shop is also cooperating with local schools by making arrangements for them to exhibit shows after Morgan's have displayed them.

Prices on Dufaycolor prints and enlargements have been reduced 10 to 50 per cent, due to recent laboratory developments, the Dufaycolor Co., Inc., of 30 Rockefeller Plaza, New York City, announced recently. As a further stimulant to fine color work, the Dufaycolor Co. are offering \$100 for every Dufaycolor transparency selected as the "Dufaycolor Prize Picture." They will also pay \$10 for other transparencies selected for advertising purposes and exhibitions. Write the above address for complete details.

Cykon and Cykora, two new papers, have been announced by the Agfa Ansco Corporation, of Binghamton, N.Y. Cykon is for contact prints and Cykora for projection prints. The new papers offer an improved full-scale range and rich warm-black tones. A wide variety of surfaces are available and while these papers are adaptable for any type of picture, they are ideal for portraiture. Cykon and Cykora are now available at all photographic dealers.

New photoflood and photoflash lamps have just been announced by the General Electric Co., Nela Park, Cleveland, Ohio. The new photoflash lamps are a foil-filled "Synchro Press No. 11" and a wire-filled "Synchro Press No. 16." The wire-filled No. 7 photoflash lamp has also been greatly improved. Each of the above lamps is designed especially for news-camera work. The new photoflood lamp is the self-reflecting type and is bell-shaped. No. R2 photoflood has a color quality similar to

that of the standard 500-watt photoflood No. 2. You can obtain further details from your local dealer, or the above address.

The new Eastman film developer, Kodalk Fine Grain Developer (DK-20), is now available in prepared package form in quantities sufficient to prepare one pint, one quart, one gallon, and larger quantities, the Eastman Kodak Company announces from Rochester, N. Y.

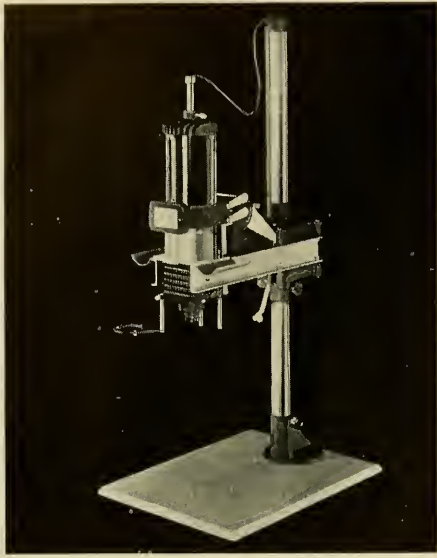
A new Kodachrome service for minicams. After April 1, 1939, the Eastman Kodak Company announces that all miniature camera Kodachrome Film K828 and K135, sent in for processing, will be returned in the form of individual transparencies, ready-mounted for immediate projection and without additional charge.

The three new Eastman 35mm. films, Kodak Panatomic-X, Kodak Plus-X and Kodak Super-XX, are now available in a form especially suited for darkroom loading of miniature camera magazines.

The new Kodaslide Projector, Model 2, for 2 x 2-inch slides or the new Kodaslide Ready-mounts, has just been announced by the Eastman Kodak Company, of Rochester, N.Y. The new projector is striking in design and unusually efficient in operation. With a 5-inch, F:3.7 lens, it is priced at \$33.50, including lamp.

The F-R Vaporator, employing the famous Vaporate process, has been recently introduced by the Fink-Roselieve Co., 109 West 64th St., New York, N.Y. The F-R Vaporator offers a simple, economical and efficient system of protecting your films from every possible sort of damage. It keeps the film from aging, prevents scratching, and keeps the surface clean. Operation is simple. The film is placed in the Vaporator, a few drops of chemicals are added and in a few minutes the film is protected and preserved for all time. See the F-R Vaporator at your dealer's or write the above address for further details.

The Stereoly Polaroid System of Three-Dimensional Projection is described fully in a booklet being distributed free by E. Leitz, Inc., 730 Fifth Ave., New York City. Using several attachments to a regular Leitz VIII-S Projector, and a pair of viewing glasses, remarkable effects are achieved. Ask for booklet 1271.



New Omega Model C

The newly-introduced Model C Omega, for film up to $2\frac{1}{4} \times 3\frac{1}{4}$ —latest in the famous Simmon line of quality enlargers, is especially built for the photographer who works in more than one miniature film size. Interchangeable, dust-free negative carriers, double condenser assemblies and lens boards permit easy, rapid change-over from one film size to another. This flexibility is a great economy—Model C Omega does the work of two or three separate machines.

The Model C Omega is a beautifully constructed instrument. It is built along the same rugged lines as the Model D Omega, Simmon enlarger for 4×5 film. The four-foot steel post permits $8\frac{1}{2}$ times linear enlargement for $2\frac{1}{4} \times 3\frac{1}{4}$ -inch negatives, 20 times for 35mm. double frames.

A 75-watt 110-volt G. E. projection bulb, and highly efficient double condenser system, permits short exposures on slower enlarging papers. An exclusive Dyna-Thermal ventilating system, together with the heavy bakelite lamphouse, keeps negative cool.

Dust-free negative carriers are available in a variety of sizes; glass holders may also be obtained. There's a long focusing lever for speedy, accurate focusing.

Simmon lenses and Bausch and Lomb Tessars are available. The Omega is priced

at \$97.50. This includes detachable lens board, without lens.

For full descriptive information on the new Model C Omega, write: Simmon Bros., 37-06 Thirty-sixth St., Long Island City, N.Y.

An attractive brochure on the uses and operation of the popular **Korelle - Reflex Camera** has been prepared by Burke & James, Inc., 223 W. Madison St., Chicago, Ill. The Korelle is an amazingly adaptable camera, $2\frac{1}{4} \times 2\frac{1}{4}$ -inch negative size, offering ground glass focusing, interchangeable lenses and ease of operation, in a small size. The brochure will be sent free upon request to those interested.

The new **Agfa Memo 35mm. Camera** has been introduced to the market by the Agfa Ansco Corporation, of Binghamton, N.Y. A finely built precision instrument, the new Memo offers many valuable features. It is equipped with an Agfa Memar F:3.5 lens and a shutter with speeds from $\frac{1}{2}$ to $\frac{1}{200}$ th second, time and bulb. Unusually simple to load, the Memo offers an extremely easy method of advancing the film. Film is advanced by a simple sliding lever that is exclusive with the Memo. There is an automatic exposure counter and a built-in depth of field scale. Price is \$35. See it at your dealer's, or write the above address for illustrated folder.

The **Imperial visual exposure meter** is a new extinction type meter, introduced by the Chess-United Co., Emmet Bldg., New York City. It employs an extinction wedge designed to compensate for the peculiarities of human vision. A supplementary wedge for artificial light, that can be moved into the optical path by a turn of a knob. See the Imperial Meter at your dealer's, or write the above address for further details.

A new **Monotone Viewing Filter** has just been introduced by Willoughbys, 110 W. 32nd St., New York City. The viewing filter shows you your prospective picture in monochrome and is a great aid in balancing lighting and noting the degree of contrast present in the picture. The Monotone Viewing Filter is priced at \$1.50 and may be obtained from your local dealer or by writing the above address.

Our Book Shelves

Sierra Nevada, the John Muir Trail, by Ansel Adams., page size 12½x16¾," cloth bound, price \$15.00.

This book is unquestionably one of the most beautiful and technically perfect photographic books so far produced. The quality of the reproductions is so remarkable that only an expert could distinguish the reproduction from the actual print. This is as it should be, for part of the beauty of Mr. Adams' photographs is due to his superb technical abilities.

Each of the forty-nine pictures reproduced is tipped in on a page by itself with the facing page left blank so that the photograph may be enjoyed without interference.

No attempt has been made to catalogue the better known beauty spots of the Sierra Nevadas. The book bears no resemblance to the ordinary tourists guide to scenic splendor. Rather, as the author states in his forward: "This work then, is a transmission of emotional experience—personal, it is true, as any work of art must be,—but inclusive in the sense that others have enjoyed similar experiences so that they will understand this interpretation of the intimate and intense beauty of the Sierra Nevada."

Only five hundred numbered and signed copies have been printed. We are told that the edition is being rapidly exhausted. Those who would like to own one of the most superb picture books which photography, in its finer aspects, has made possible should order promptly. This office can take care of your request or you may address The Archetype Press, Berkeley, Calif.

Commercial Photography with the Miniature Camera, by C. A. Goldner. Published by the Camera Craft Publishing Co., of San Francisco, Calif. 96 pages, 5¼x7½ inches, 17 illustrations, paper bound, \$1.00.

Too often, when an author is concerned with writing about making money, he or she is inclined to wander easily into theory and gay imaginative flights. This is only

a natural impulse as all of us have a fund of money making ideas that only require a few millions to initiate, or a combination like Einstein and Roosevelt to put them over. Of course, we never try these ideas but we like to think about them and if we were writing a book on making money the impulse to include them would be almost irresistible.

Happily, Mr. Goldner has indulged in none of these tours of fancy. His book is thoroughly and completely practical, offering nothing that hasn't been tried and found to be successful in operation. He tells just how he operates a successful commercial business with a miniature camera. Only business that falls easily within the range of the miniature camera is considered.

The author gives the details of obtaining business from your local manufacturers and retail merchants; he considers the important legal, accident and insurance work; and discusses the big business to be found in the real estate field. Naturally, color photography is also considered.

The technical side of the work is discussed in detail as are the ways in which work should be presented and the prices that should be charged.

Throughout, the book remains as practical and matter of fact as a silver dollar and the methods given offer the photographer who wants to enter the commercial field a logical method of building up a business, without the necessity of a large capital investment.

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HT vs. LIGHTING	Edward Weston
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"Pepper, 1930"

Edward Weston

Light vs. Lighting

Edward Weston

THE most important element with which the photographer must deal is light. Camera, lens, film, developer, and printing paper, have but one purpose: to capture and present light. Yet for all its place of importance in the photographic scheme, light is too often unknown, unstudied, and abused by photographers today. Their knowledge of it is likely to begin and end with a handbook on studio lighting-effects—how many flood lamps and flash-bulbs to have, and where to place them to achieve which result. Artificial light has its place in photography, just as the miniature camera has; but like the latter it is frequently misused for subjects that could have been photographed far better with natural light.

Recently an acquaintance of mine who has taken up photography, came to consult me about what books on lighting he should get. I tried to show him that books on lighting are not the best first step for a beginner. Since artificial light is only a substitute for natural light, a thorough understanding of the latter is the first step toward intelligent use of the former. Only from the basis of his own understanding of light and its effects can the beginner judge whether the systems given in books are suited to his particular purposes. Therefore, I advised my friend to go out with his camera and study light at first hand: To see what it does to familiar and unfamiliar objects—a tree, a face, a cloud, or a cloudless sky. To look at the same scene at every hour of the day—not glance—but look with understanding, until he learned to see objects in terms of their light quality.

My harangue probably did little good. In our age of hurry, canned knowledge is much in favor. Beginners expect to learn everything out of a book; they are looking for shortcuts, not experience. The advantage of

"lighting" is that it can be taught, diagrammed and described. The disadvantage comes when the embryo photographer tries to apply its rules to the world around him, and discovers that nature seldom conforms to laboratory and textbook conditions.

For the serious photographer—for any photographer interested in making more than snapshots—a thorough knowledge and understanding of light is essential. But such knowledge cannot be found predigested in books. This article—or any other written on the subject—can do no more than provide you with a point of departure. From there on the only method is trial and error; the only teacher, experience.

Technical Procedure

Because the subject of light cannot be divorced from all other aspects of the photographic process, we shall have to begin with a consideration of the technical approach. Here, for the advanced worker as well as for the beginner, there is only one rule. If your interest lies in the technical side of photography, there is nothing against trying all the gadgets and formulas you want or need. But if your interest is primarily in the picture, if you want to use photography as a medium of expression, then *keep your equipment simple*.

It is of infinitely greater value to know *all* the potentialities of one camera, one lens, one film, etc., than it is to have a smattering of superficial knowledge about several different makes and brands. After thirty-six years of photographing, I own two cameras, and one of these I use exclusively for portraiture. During the past year I have been using two different lenses, because I am contemplating a change in present equipment. I use one brand of film, one developer, one paper. Of course I am not still using the equipment I started out with—there had to be changes from time to time. But these changes were never made until my *seeing* had so far outstripped the capabilities of my tools that change was a matter of necessity.

The reason for this severe simplification should be obvious. The photographer's first problem is to become complete master of his tools. And by complete master I don't mean just knowing their possibilities and being able to use them, I mean that their use shall become second nature to him, so that he no longer has to think about them, any more than an experienced driver has to think of the mechanical operations he performs in driving a car. Until you have achieved this mastery the work you produce will always partake of the accidental.

Although your aim must be to see in terms of your whole photographic process, for convenience we may divide it into three phases:

1. *Learning to see through your lens.* Practice translating whatever you look at with your eyes into the perspectives each element of your lens would give, until you can automatically visualize the relationships of near and distant objects in terms of the focal length of your lens.

2. *Learning to see in terms of your film emulsion.* Since the complete tonal range in nature exceeds the scale of any film, it is necessary to discover all the possibilities and limitations of the emulsion you choose. Then you will be able to visualize a scene before you, transposed into the scale of your emulsion so accurately that you can determine how any given value will be rendered in relation to all the other values.



"Ranch—San Juan Grade, 1934"

Edward Weston

3. *Learning to see in terms of your paper emulsion.* No paper has the range from black to white that a full-scale negative has. Learn the limitations of your paper emulsion, that is, learn how much of your negative scale it can retain for your finished print.

When you have learned thus to see in terms of the potentialities of your equipment, you will no longer use your control processes—exposure, developing and printing—haphazardly. The function of these processes is to carry out your original intention from creation of the latent image to presentation of the finished print. Through variations in exposure and developing time and, when necessary, control in printing, you will be able to compress or expand your scale, change the given values if desired, in short, say whatever it is you want to say about the object, person, or scene before you.

Before leaving the subject of technical approach it will be well to consider the place of the exposure meter. A beginner seriously interested in becoming a good photographer will be wise to learn to judge light accurately on his ground glass before he gets an exposure meter. The average reaction to this statement will be that I am a fuddy-duddy, insisting one learn to drive a buggy long after it has been replaced by the automobile. But let us examine the facts. A photo-electric cell will give you an

exact reading of light in candlepowers which, by twirling a few dials, you can translate into the correct exposure under given conditions for a given aperture. But what is the "correct" exposure? The only correct exposure is the one that will produce exactly the effect you want in your finished print, via the negative. And for this purpose you may not want an average negative at all.

The photo-electric cell is an invaluable instrument—I am never without one—but its reading should not become the photographer's gospel. Rather it should be used to give him a quick and accurate point of departure from which to gauge exposure.

In the hands of a beginner the danger is that the meter may become a barrier. When it is but a moment's work to take a reading, the photographer is inclined to pay little attention to the all-important element of light itself.

Practical Application

At this point the photographer should have a fairly sound knowledge of light in terms of what his equipment is capable of rendering. It remains for him to guard against any other limitations. To accept no rules save self-imposed ones, dictated by his own feeling for what he wants to say.

When I was very young I learned from my Bull's Eye manual to photograph a scene with the sun more or less at 45° angle to the camera, never in front or directly behind it, and *never* directly overhead. It didn't take me long to discover that such limitations were foolish. There is no time of day (or year) when sunlight is better, photographically speaking, than another. It may be better for a certain subject, that is all. The light of high noon is just as important as morning or evening light, almost every "authority" to the contrary notwithstanding.

In fact, partly because of the lessening of shadow intrusion, the simpler light between the forbidden hours of 10:00 and 2:00, is more often useful than morning or evening light in revealing the thing itself rather than a mood evoked by the play of shadow on it. I would guess that at least as much of my work is done around noon as before and after. Checking over the photographs used to illustrate my last three articles in *CAMERA CRAFT* I find 12 out of 16 were made between 10:00 and 2:00.

Two of the pictures accompanying this article were made at noon; the San Juan Ranch and the Bean Ranch. In the former, besides being excited by the composition, I wanted to show the hard, sunbaked, quality of the ground which is so characteristic of California in summer. The picture depends on the swing of the corral fence (accented by the concentration of sunlight on the baked ground) and the simplicity of the way the various objects are lighted. Noon was the only time to make this picture. Later in the day (or earlier) the corral would lose its form in a complicated crisscross of shadows cast by the fenceposts, and the spaced accents of the shadowless oaks dotted on the curve of the hill would be destroyed.

In the case of the Bean Ranch the reasons for making the picture at noon are even more obvious. The clarity and meaning of the picture would be lost if the neat black ellipses under the trees were sprawled out across the foreground and the furrows between the plant rows were so filled



"Bean Ranch—So. Calif., 1937"

Edward Weston

with shadows as to hide the important contrast provided by the texture of the plowed earth.

Noon light is by no means the only popular taboo. I have been out with photographers who felt that the day's work necessarily ended when clouds obscured the sun or fog rolled in. The photographer can function as long as there is light; his work—his adventure—is a rediscovery of the world in terms of light. To know the phenomena of his world only as brilliant sunlight reveals them, is to know but a small part. Mist in the air, curtains of fog, clouds and overcast skies, the afterglow when the sun has set and the dawn light before sunrise provide him with different avenues of approach to his subject matter, or, more properly, provide him with different subject matter. For it cannot be too strongly emphasized that *reflected light is the photographer's subject matter*. Whether you photograph shoes, ships, or sealing wax, it is the light reflected from your subject that forms your image.

The pictures of Moonrise and Moonset indicate the extremes of contrast possible in presenting one subject under different light conditions. Both pictures were made from the Texas Springs Camp Ground on the eastern side of Death Valley. The Moonset picture was made shortly after sunrise when the bare peaks of the Panamint Range (over ten miles away) were flooded with light, while the floor of the valley and eastern



"Moonrise, Death Valley, 1939"

Edward Weston

side were still in shadow. The strong morning sun had washed all color from the sky and drowned out the moon's light.

The picture of Moonrise was made at least an hour after sunset. Although the sky and near mudhills are still partially illumined by the afterglow of daylight it is already dark enough for the moon to show its own radiance. Both are pictures of the same subject in similar settings, but they achieve opposite effects. In the former the moon appears simply as a small object in the landscape, like a plate tossed into the sky, visible only by the sun's direct illumination. In the latter the moon appears not only as a self-radiant body, but as the illuminating agent of the scene it dominates. Perhaps the moon is an extreme example to point my discussion, but an almost equal variation in light range can be found in most terrestrial subject matter.

When the accompanying picture of the nude on the sand was hung at an eastern camera club recently, a controversy arose over how the figure had been lighted. Some of the members were of the opinion that only daylight was used, but others insisted that I would have had to use flash-bulbs to obtain the black line around the figure. The flash-bulb supporters were apparently unacquainted with one of the commonest effects of sunlight. Any light figure or rounded object against a light background will



"Moonset at Sunrise, Death Valley, 1939"

Edward Weston

appear to have a dark line around it when bright sunlight is hitting it squarely. In this case the model was lying on a steep sand bank and my camera was set up on a parallel bank; the morning sun was directly behind me, and the brilliance of the light was increased by reflection from the surrounding dunes. Given such conditions a dark outline is bound to appear in your picture, but it is for the photographer to decide how he will use it. If he wants to emphasize it the procedure is simple enough—in this case by giving the minimum exposure to get the flesh fully timed, developing out for a fairly dense negative, and making a straight print on normal grade paper.

The picture of the pepper (frontispiece) I have included as an example of what can be done with a difficult subject in natural light. At the time I made it I was doing a great deal of still-life work, and my "studio" consisted of a porch open on three sides and screened on top by an awning of cheese cloth. This particular pepper occupied me for several days. It seemed almost impossible to get all of its subtle contours outlined at once—I put it against every conceivable kind of background, light ones and dark ones, I put it on the ground in the shade, against the sky in sunlight, I worked several days and made half a dozen negatives, but each time I knew I was wrong, I wasn't quite getting it. Then in a try-everything-once spirit



"Nude on Sand, 1936"

Edward Weston

I put it in a tin funnel and the moment I saw it there I knew my troubles were over. No direct light was needed. The diffused daylight on my porch brought out the top masses while reflected light from the funnel outlined the lower curves without eating into the shadowed folds. The dark interior of the funnel joined the shadow of the pepper in preserving the light outlines, but this dark area did not come far enough forward to leave the pepper floating in black. Instead the light area on the front curve of the funnel provided a necessary base and a helpful curve to carry out and emphasize the form of the subject. So the problems of light and background were simultaneously solved.

Now perhaps an expert with artificial light could have achieved a satisfactory solution in less time. Perhaps he could duplicate this result, but if he did it would be at the expense of simplicity and, as I have pointed out, a simplified technical approach is a vital factor if the photographer is to have any time to devote to his real job—seeing.

Nor is that the only point to be considered in discussing the advantages of natural light. Remember that every object you photograph is unique, and a unique problem demands a unique solution. The photographer who constantly uses artificial light has a tendency to develop a formula—a set of lighting-effects that he applies with little variation to everything that comes along. If you are using natural light it is almost impossible to fall into the



"Tenaya Lake, Yosemite, 1937"

Edward Weston

lazy habit of standardization. Instead of working with a static object on which you are free to impose your own interpretation by means of a limited number of light arrangements, you are faced with living subject matter, whose appearance is never fixed, but is undergoing constant subtle changes at every moment of the day, and from this shifting scene you must pick the essential time—the moment when the thing in itself stands most completely revealed.

There will always be artificial light. It has a place and purpose. But when there is no necessity for using it, it seems unfortunate, to say the least, to make it pinch-hit for daylight.

The possibilities of natural light are so infinitely great they can never be exhausted. In a lifetime you could hardly exhaust all of the light-possibilities for a single subject, and the world is over-crowded with subject matter as yet untouched by the camera. The study of light is the study of the whole photographic process, with the emphasis placed on the result rather than the means. The kind of equipment used is not what matters. The important thing is that you stay with whatever equipment you choose until it becomes an automatic extension of your own vision, a third eye. Then, through this photographic eye you will be able to look out on a new light-world, a world for the most part uncharted and unexplored, a world that lies waiting to be discovered and revealed.

P. S. On P. and H.

Attention—Miniature

Slide Projectors

H. C. Benedict, Ph. D.

I HAD thought that two articles on the P. and H. process would be sufficient, but since I sent in the last manuscript I have run across something that is too good to keep. Hence this short addendum. Very little imagination is required to surmise that if the P. and H. process is excellent in the developing of negative film it ought to be useful in processing positive film. But the results so far exceed my expectations that I think you will be interested in this further application of the process.

In making positive transparencies we must work with a printing medium which comes in only one degree of contrast. More often than not the contrast of the negative does not exactly match the contrast of the positive emulsion with the result that detail is lost in either the highlights or shadows or both. The improvement in highlight and shadow detail obtained through P. and H. processing overcomes this difficulty to a great extent.

I tried the P. and H. process on paper positive prints and the results were very poor. Possibly the paper holds some developer, but it did not act that way. There were no rich tones, the print was muddy and streaked. It seems probable that the paper emulsion is too thin to hold enough solution for complete development. However, because papers are always developed to completion and because they are available in varying degrees of contrast the printing operation does not stand in need of such processing controls as are offered by the P. and H. process.

Negative
Exposures

$f:4.5$
 $1/25 \text{ sec.}$

$f:4.5$
 $1/50 \text{ sec.}$

$f:4.5$
 $1/100 \text{ sec.}$

$f:4.5$
 $1/200 \text{ sec.}$

$f:5.6$
 $1/200 \text{ sec.}$

$f:8$
 $1/200 \text{ sec.}$

$f:11$
 $1/200 \text{ sec.}$



Negative P. & H.
Positive D-16



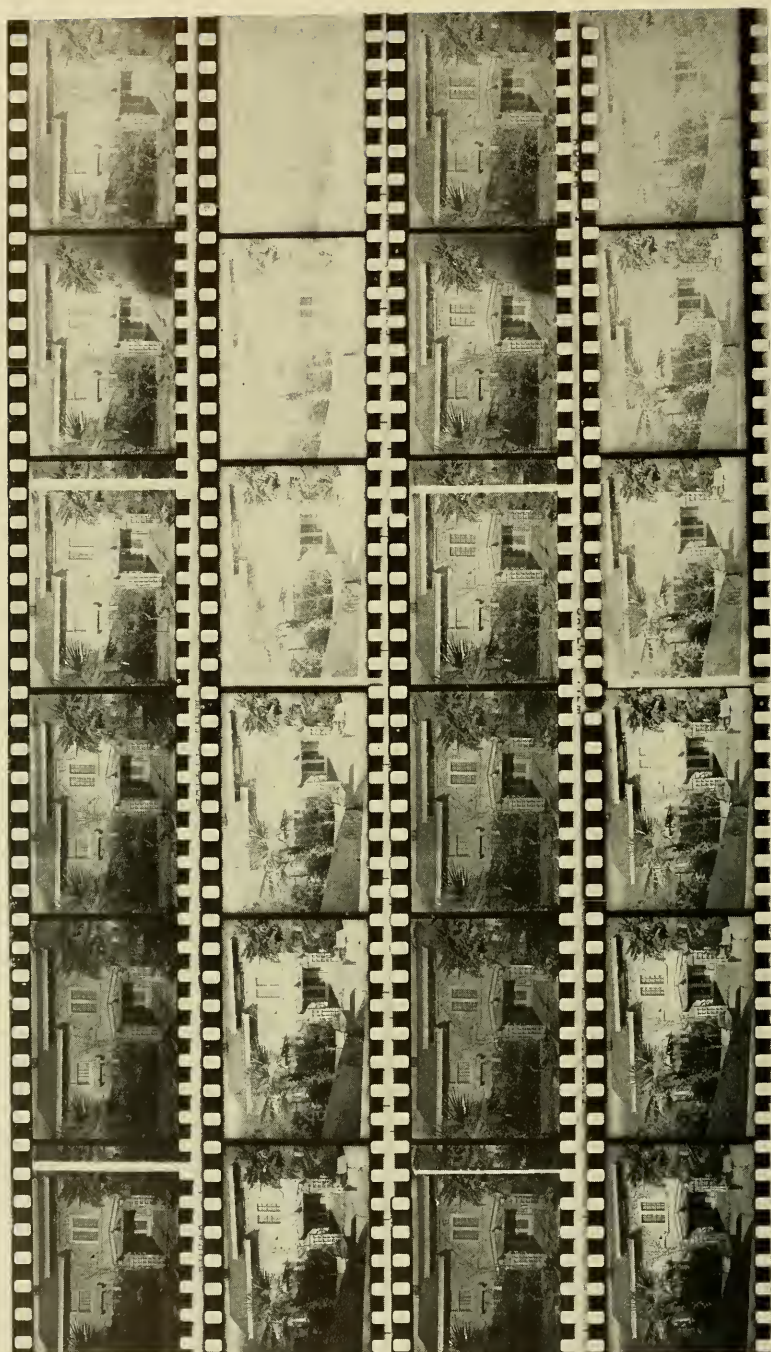
Negative DK-20
Positive D-16



Negative P. & H.
Positive P. & H.



Negative DK-20
Positive P. & H.



*Negative
Exposures*

*f:2
1/25 sec.*

*f:2.7
1/25 sec.*

*f:4
1/25 sec.*

*f:5.6
1/25 sec.*

*f:8
1/25 sec.*

*f:8
1/50 sec.*

P. & H. Negative

DK-20 Negative

P. & H. Negative

DK-20 Negative

Pair on left were given 10 secs. exposure and developed in D-16.

Pair on right were given 7 secs. exposure and P. & H. Processed.

*Negative
Exposures*

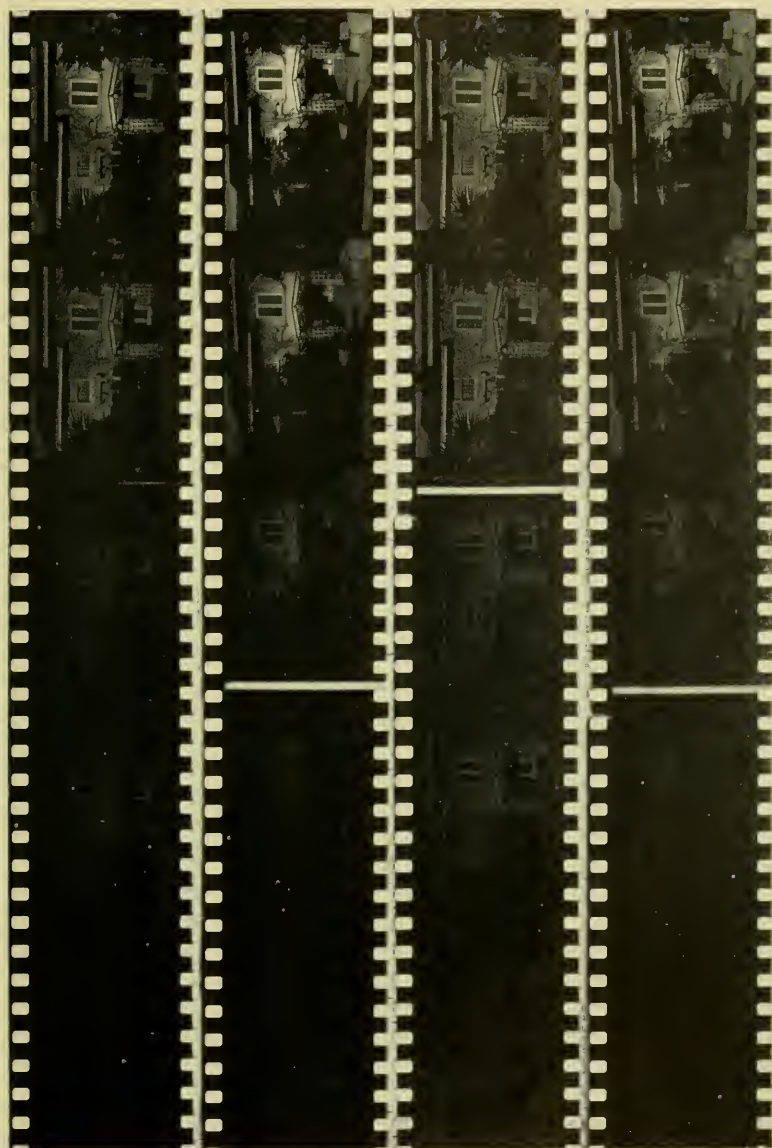
*f:8
1/125 sec.*

*f:8
1/250 sec.*

*f:8
1/500 sec.*

*f:8
1/1250 sec.*

*f:11
1/1250 sec.*



P. & H. Negative

DK-20 Negative

P. & H. Negative

DK-20 Negative

*The pair on left were given 10 secs.
exposure and developed in D-16.*

*The pair on right were given 7 secs.
exposure and P. & H. Processed.*

This illustration and the one on the facing page were made from the four continuous film strips. The strips are shown in two parts to avoid too great a reduction.

When used on film positives the P. and H. method is as excellent as it is on the original negative and if *both* film and positive are similarly processed, the results are—well, I shall let them speak for themselves.

In the first illustration, the two strips on the left were made from the same negatives used last month; the film positives on the right were developed by the P. and H. process. The discussion of these negatives need not be repeated, but notice particularly, in the P. and H. positive from the P. and H. negative, the almost complete balancing of density from one end of the strip to the other and with no loss in contrast! The P. and H. processed positive strip from the DK20 negative is better than the one given regular development in D16.

What a boon the P. and H. process can be to those who make their own positive film strips. The benefits essentially boil down to this: if both the negative and the positive undergo the P. and H. process there will be practically no need for individual frame exposures. Even if the negative exposures have varied by a factor of forty or fifty the whole positive can be printed at the same exposure and the result will show little variation in projection density. The process will be a great help when printing films which have been developed by an older method. Perhaps certain frames may require individual exposures but the P. and H. process on the positive film will take care of the weak and strong contrast frames. I am a strong advocate of making a positive film print from the complete length of every 35mm. negative. Then each exposure can be projected as a positive to the size you would like to have an enlargement and you can decide which frames are worth enlarging and where they should be trimmed without wasting paper. This decision is impracticable from the tiny negative or even the contact print. Paraphrasing an old song: "This used to be so hard to do, it used to make me cry. But since the P. and H. process, it's as easy as pumpkin pie. MIS SIS . . ." (No, that doesn't fit at all.) Now thirty-six to forty exposures can be strip printed and developed in less time than it would take to make contact prints on paper and at no greater expense.

I don't pretend that my method is the last word, Mr. Perry has a better developer and probably will include the correct immersion times for positive films in his book, but this is the way the illustrations were made and it seems to work very well. A ten watt, amber (so-called safe-light) bulb was put in a standard printing box and pieces of scotch tape were stuck to the glass in the form of a rectangle as a mask, the sides of which prevent light striking the edges of the film. Three negatives can be printed with one exposure if the ends of the rectangle are exactly three double frames apart. Thumb tacks in the edges of the box served as guides for the film. Two small pieces of scotch tape placed along one edge in line with the perforations act as stops. Having once lined up the negative and positive stock, all that is necessary to make successive three-frame exposures is to put a wooden point in the perforations at one stop and push until the next stop is reached, which moves both negative and raw positive film together the correct amount. As the developing time for positive film is usually short, the developer (DK50R) was cooled down to 48°F. and the film immersed for one minute, but probably the same result would be accomplished at the

usual temperature of 55°F. by merely reducing the immersion time. After winding the film on the Roll-O-Wrapper, it is submerged in water at 65°F. for seven minutes, which seems to be ample and reduces the tendency to fog. The film is then fixed and washed in the usual way.

For the benefit of those who may have inadvertently missed last month's issue of CAMERA CRAFT, a few more complete comparisons will be given. The illustrations were exposed so as to show the most at each end of the strips, the exposure being constant for the whole strip. For this reason I realize that the two ends do not represent the best possible prints that can be made from the negatives but they are almost the best. Side by side, over a wide exposure range, you can see the results of:

1. A positive print developed in D16 from a negative developed in DK20.
2. A positive print developed in D16 from a P. and H. negative.
3. A P. and H. positive from a negative developed in DK20.
4. A P. and H. positive from a P. and H. negative.

The negatives were exposed, as rapidly as possible, to avoid changes in the light conditions, on Gevaert Panchromosa film in a Contax. The negative exposures are given along the strips and the details of development have been given in previous articles.

Little comment is necessary. Observe the highlight and shadow detail, the balancing of the densities, and the constancy of the contrast. The more you look the more you see.

If you have balked at the tediousness and uncertainty of previous methods of making film positives, the P. and H. Process is just what you have been waiting for.

I can recommend it.

Formula—it is

Hillary G. Bailey, F. R. P. S.

YOU have heard of "men about town"? Those boys who get around to all the places where the so-called right people are? The chaps who call the stuffed shirts, if there be such things, and the bar-fly philosophers by their first names; the boys who can point out all the "has beens" and prophesy all the "will bees."

They are fascinating gentlemen, these men about town. They accumulate a store of information about this person and that and what makes them do some of the things they do.

Well! There are men about photographic circles, too. They get around and meet a lot of people—swell people, and funny people, too. People who have been using a camera so long that they take pictures by habit, not to



"Stepping Out"

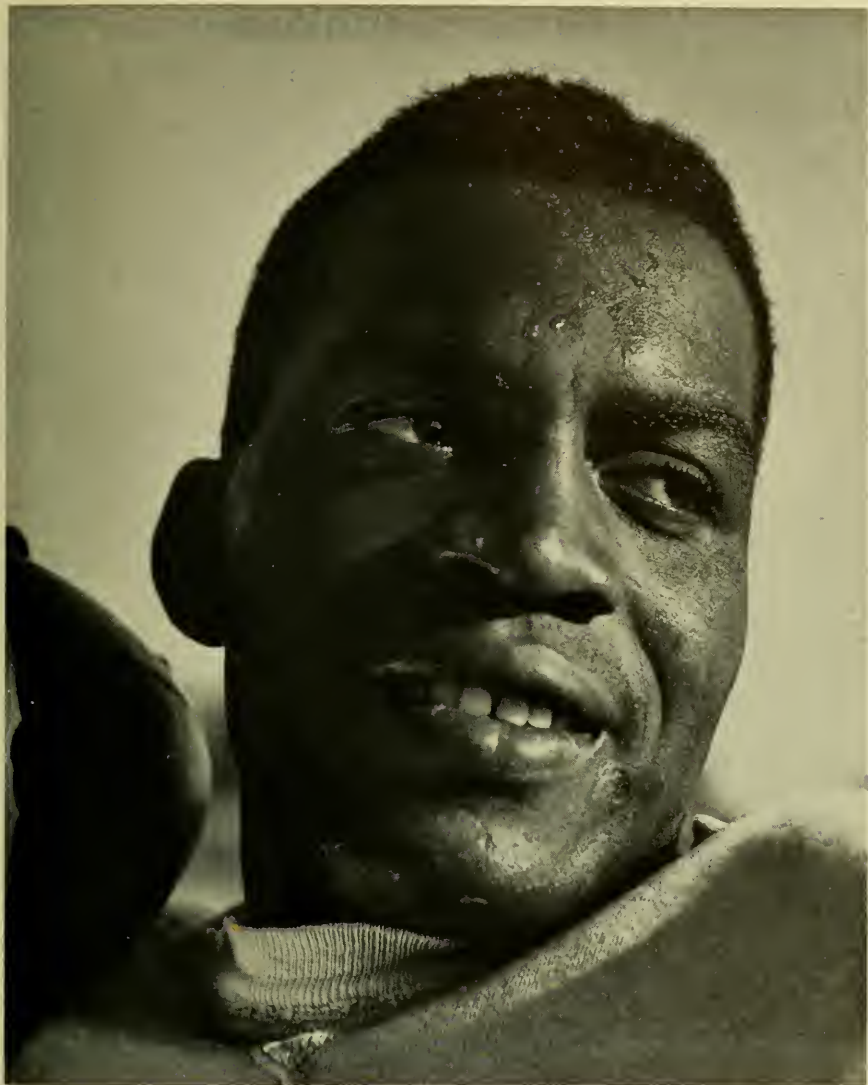
C. B. Phelps, Jr.

1st San Francisco International Salon

mention an occasional bit of cynical condescension; people who have just begun their camera clicking and are running a temperature over exposure meters, fast films, and garbage cans not yet photographed. Swell people, honest. Likeable people.

But sufferers; so conclude the men about photographic circles. They suffer from realism, f:64ism, anastigmatism and nature in the raw, very raw. Or they suffer from artisticism, impressionism, surrealism, soft focusism, paper negativeism, or some other form of camouflage. And how they suffer, although the ailment is never fatal to anything but the pocketbook and there is no cure for it this side of the infirmary. But of all the phobias from which photography addicts suffer, formula-itis is the most painful. It can provide more torment to the square inch of dark room space than any other malady to which the camera user is allergic.

Back in the old days the professional photographer had it bad. If he did not have a secret formula there was nothing with which he could lay the other boys in the shade when he went to conventions, and the tall story club began to get going. He was sincere, too, in his belief. It was not hokum to him, then. He may have had a negative developing solution so stale and "cured" for so long that he all but drove the negatives into it with a hammer and dug them out later with a crow bar, but still he believed there was magic in the foul smelling mess. There was. It was magical that any image appeared at all.



"Kenny Washington"

Charles E. Kerlee

1st San Francisco International Salon

For The Coast Magazine

Then, when artificial lights pushed the old skylight back into the discard of rainy days, there was a rash of light formulas that are still a raging fever. These formulas burned so fiercely that a few photographers screwed their lights to the wall and nailed their posing stools to the floor only to pry them loose every time a demonstrator came around with a new suggestion, until there were no places that would hold screws and nails any longer. But formula-itis persisted.

No professional, however, ever suffered with the malady as severely as has and does the photographic hobbyist. Like all the Aunt Susies, it seems to be the Lord's will for him to suffer. He is a psychopathic patient that will risk anything and everything in pursuit of a new formula. He will spare no time, money or labor. He may refuse to carry out the ashes but he will work a whole weekend scarcely stopping to eat if he can evolve a trick method of working.

For instance, do you remember the fine-grain spasm? If formula-itis could have killed, fine-grainism would have laid them in rows. If there was any chemical soluble in water not put into somebody's fine-grain formula at some time or other, it was only because the stock houses and corner drug stores did not have it. And all of them worked, too, according to the experimenter. At least, they worked the formula hounds; and everybody was happy. It was a terrible blow when the manufacturers proved that formulas were not as responsible for fine-grain as was that mysterious, elusive and annoying nuisance called gamma, for few hobbyists can corner a gamma.

Of course, photographers are not alone in their pursuit of formulas. It seems to be the business of living at the present time to reduce everything and everybody to a standard formula. You take so much of this, add so much of that, shake well, and you get something else, but never quite what you want. Furthermore, everybody else's formula except our own is off a bit, and the world will never function just as it should until our own is adopted and made standard.

Take nations. Russia formed a bloody formula which they would ram down the necks of the rest of the world, and have been too successful for comfort. Germany has a formula to describe what she thinks is Kultur. Italy has another formula intended to revive the glory that once was Caesar's. Spain has two formulas and now as always is shedding its own blood to prove both are right. In America there are as many formulas, as far as government is concerned, as there are people. May it always be so.

With formulas the passion of the world, it is small wonder that photographers should try to solve their problems by the so much of this and so much of that receipt.

They want a formula for posing; one for exposing; another for developing; and still another for fixing and drying. They want to nail a set of exact do's and don'ts on the darkroom wall with which to secure a standard density and contrast; they want rules for composition so infallible that no attention need be given anything but the rules. They want specifications for print quality, for mounting, even for getting prints hung in salons or delivered to customers. They want to push buttons and get desired results. And their wants are not unreasonable, nor are photographers to be criticized for being formula hunters. Rules are necessary. They are imperative.



"Radiograph of Water Lily"

E. Elizabeth Hall

1st San Francisco International Salon

No photographer can hope to achieve any degree of success without them. *But they are not the end of the story.*

For centuries, religion was sold usually as a set of commandments. If you didn't do exactly as the canonic law prescribed you were sure to go to hell. There was no equivocation, no leniency, no compromise. God was a hard-boiled, bewhiskered ruler on a throne who threw bolts of lightning at disobedient servants. His wrath could not be escaped.

But the salesmen of religion who used "the crack the whip" selling program failed to do their merchandise justice just as photographers fail to do right by photography when they are satisfied to simply follow formulas. Religion needs rules as a means to an end and not as the end itself. Do's and don'ts for right living are indispensable guide lines and road maps with which to proceed toward an ultimate goal. But religion itself is the expression of the individual, perhaps, in terms of the rules, but not because of them.

It is the same with photography as every man about photographic circles can tell you. Rules and formulas are qualifying tools to be adopted and adapted by each individual for purposes of self expression. They are the instruments with which he interprets an emotion, tells a story or records a gradation. They are the apparatus with which he works to achieve success. They are a means to an end and not the end in itself. May we have more of them?

Camera Club Growing Pains

Nestor Barrett

THE tremendous rise in photographic interest which we have seen in the last few years has developed as one of its by-products a demand for camera clubs. And where formerly a camera club was a place for those interested in making good pictures to congregate for mutual benefit and sometimes admiration, the camera club of today is a meeting place of specialists (shades of Chic Sale) and woe unto the owner of a Century view who stumbles inadvertently into the weekly meeting of the Metropolis Minicam Society. In short, many camera clubs have become what the name implies, places where you are judged by the kind of camera you carry rather than by the prints you make.



"Transmutation"

John Regensburg

1st San Francisco International Salon

But for all that, whether your club is the Oshkosh Cine Forum or the San Salvador Focal Plane and Debating Society, makes little difference—you're going to have growing pains and stumble over the same painful obstructions as every other club has from time immemorial, unless you are possessed with greater sagacity than ordinary mortals. I have listed a few of these trouble makers below in the hope that it may help some club, just starting, to avoid them.

One of the first posers a club meets is judging its monthly print contest. You'll be surprised what a lot of trouble this can make. It's a most perplexing question. You can get outside judges of good reputation—but can you? Maybe once or twice a year the ordinary club will be able to persuade a competent person to help it judge its prints, but the job has to be done every month. So most clubs end up by having the membership vote on the prints at each meeting, the highest vote giving that print the first award, etc. It looks like a good impartial system, but it has the fatal fault of "the blind leading the blind." It is an outstanding club, indeed, which has even two skilled pictorialists on its roster and their votes are buried under an avalanche of utterly incompetent judging.

The results of such a system can be extremely ludicrous. I recall a particular instance in which a print entered in a monthly club competition did not win a prize of any kind, not even a sixth honorable mention—and there were only about a dozen prints being judged. All the prints which won awards were sent by the club print director to a well known contest always judged by pictorialists of unimpeachable honesty and outstanding ability. The print which the club members had scorned was submitted to the same contest by the member individually. This print was awarded third place in the competition and not a one of the "prize" prints selected by the club members even placed.

Beware of elaborate mathematical systems for rating prints. Every club seems to have its mathematician and he delights in devising a "fool-proof" scheme for rating prints. I know of one club which took great pride in its system, a highly involved and complicated scheme, until the evening came when a man who got six honorable mentions won the first prize, while his colleague with three first votes and two seconds was sent home disgruntled with the third prize trophy. If you have any of these budding "Einsteins" in your midst, put them to work on the horse races or the roulette wheel, but keep them away from the print competitions.

Most clubs draw their membership from both sexes. A few have confined themselves to men only and there is the well known club in the East for women only. As long as a club confines its membership to persons who are really interested in photography there should be no trouble arise from both sexes taking part in the meetings. But this is not easy to do. If a club, composed chiefly of men, admits in a moment of weakness one or two highly competent lady photographers to its midst, it will not be long before some of the members' wives want to join. And they are not always motivated by a desire to learn the latest darkroom tricks. They are often primarily interested in the social angle. A friend of mine who is a long-time member of one of the oldest and most highly respected photographic groups in the country, told me his club nearly went under several years ago because



"Citadel"

Robert A. Barrows

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so many of the members' non-photographing wives and relatives come to the club rooms to play bridge and give parties there was no longer room or time for photographic activities. The ladies, God bless them, we can't do without them, but we want to be sure their hearts are in the developer and hypo tanks before we take their checks for the first month's dues in our club.

It also seems probable that the healthiest organization will result when the membership is of the same general level of intellect. It matters not what their financial status is, but a club made up of half snapshooters who desire nothing better and half pictorialists will not remain happy long unless there is a basis for continued association in the congenial fellowship which exists among the members. This fellowship will not develop unless there is a mutual respect between individuals, and such respect will not exist between sloppy and skillful craftsmen. Do not misunderstand. I hold no brief for snobs. There is no reason why the skilled surgeon and the bricklayer cannot have the closest communion of interest, each able and sincere artists in some photographic field, but the uncouth mixed with the refined will soon come to the same end as when cheap and good money attempt to circulate together; the baser will drive the other out of circulation.

I have avoided in this article the discussion of the routine steps in starting a camera club. The usual formalities in such cases are known to nearly every literate person. If you need additional guidance it can be obtained by applying to the secretary of the Photographic Society of America. This organization publishes a pamphlet on the subject and additional help can be obtained from the various companies which supply photographic materials.

The camera club is the backbone of progress in photography. Properly guided it will not only return the effort expended by the membership a thousand fold, but it will become a living and vital force in the onward march of general community progress.

Making Your Own Developing Tanks

Henry Weller, Jr.

SOME time ago, having occasion to conduct experimental fine-grain processing of small cut films, we required small developing tanks to do the job most conveniently. Since there seemed to be no tank of just the right dimensions to hold a small quantity of the developer being tested, we decided to construct them ourselves. A thorough search was made of the literature on suitable materials for the construction of photographic apparatus, and it was indeed illuminating as we learned that a great many



Figure 1

materials could be used, in fact a long list included a number of metals and alloys, paraffined wood, rubber, glass, slate and a number of others. When an alloy was decided upon, it soon became manifest that we had a job on our hands that abounded in many difficulties. The soldering of the joints would have to be done on the outside, so that little solder would come in contact with the solution as the developer, acting as an electrolyte would cause corrosion. Also a certain composition of solder would have to be used. Besides both the cost of the metal and construction was high. Finally a nitrocellulose was decided upon, and at least we could be certain that no detrimental chemical action would take place because the material used in the construction of the tank was similar to the base of the film. Our only problem seemed to be to find a means of obtaining and fabricating this material into the desired shape. That we succeeded is evidenced by Figure I.

The small experimental tanks, right tank of Figure I, gave such good service during the tests, that larger ones were built for all processing needs.

The material used is supplied by the Du Pont Company, is shipped from Arlington, New Jersey, and is called "Pyralin." It is supplied in thicknesses ranging from .005 to .250 or $\frac{1}{4}$ inch. The tanks shown are made of the transparent sheet Pyralin $\frac{1}{16}$ inch thick. The total cost (shipping, surcharge, etc.) of one 20 by 50 inch sheet was five dollars, and was sufficient for the construction of the two small tanks before mentioned, four

4 by 5 tanks, one large wash tank which holds two and a half dozen 4 by 5 hangers, and enough extra pieces to make the sealing mixture to be discussed later. When compared with prices of tanks bought ready-made, the economy is considerable. The construction of the tanks could be carried on in one's spare time, as a matter of fact, very little work is required, as most of the time is spent waiting for either the cement or sealing mixture to dry. The material is easy to work with and is not limited to the construction of developing tanks. Its applicability in other lines will be apparent after a reading of the construction details.

Before cutting the sheet of Pyralin, it is to your advantage to know definitely just how many tanks are required and also their exact dimensions. The size of the tanks is really determined by two things: the size and quantity of film to be processed simultaneously therein, though the quantity of solution may be a deciding factor. Remember, therefore, that there are 57.75 cubic inches to the quart of fluid. The small experimental tanks before mentioned were designed to hold one quart of solution and to process $2\frac{1}{2}$ by $3\frac{1}{2}$ -inch cut films. The tanks are four-inch inside cubes and the depth of solution is a little more than $3\frac{1}{2}$ inches. The Kodak cut film hangers are used to suspend the films in the developer. Allowance must also be made for the length of the clips when planning the depth of the tanks. The 4 by 5 tanks, left in Figure I, using the No. 4A Eastman Film and Plate Developing Hangers, are designed to hold two quarts of solution and are $5\frac{5}{8}$ inches high by $4\frac{5}{8}$ inches wide by $5\frac{1}{2}$ inches long. Cylindrical tanks and special size developing trays or large hypo trays could also be made. The enterprising photographer will find a variety of applications for this material in the construction of various photographic apparatus.

When the tanks are finally designed, make a sketch to scale of the 20 by 50-inch sheet and plot and arrange the sides and bottoms which are also to scale, so that the sheet will be cut up most economically. The four sides of each tank are cut as a long strip, allowing an inch or more for an overlap. In making a four-inch cubical tank, a strip 4 inches wide by 17 inches long would be required. A wax crayon is suitable for marking on the Pyralin. Do *not* cut the Pyralin with scissors or shears. It can be done, of course, but we want edges that are cut off square and absolutely straight, and this cannot be done with scissors. Sharpen a steel scribe to a good point and, with moderate pressure, draw a line across the Pyralin. Then bend along the mark, and it will break off clean and straight.

Having cut off the long strip which will serve for the sides, let us cut out a rectangular piece for the bottom of our four-inch cubical tank, so that with this material in hand we can continue with the other steps in the making of a complete tank. The inside dimensions of the bottom will be 4 by 4 inches. The best way, in all respects, is to cut the bottom at least a half inch larger than the inside dimensions. The bottom will then extend out past the sides, but this is better, for purposes of cutting, cementing, and sealing, than attempting to fit a bottom into the sides. Next mark off the sides on the long strip with the wax crayon, *not with the scribe!* We will then have four bends to make.

To bend the Pyralin, clamp an iron bar, the top edge of which has been rounded off, in a vice and, using a Bunsen burner (or any other con-



Figure II

venient means) heat the iron along its entire length which should be more than the width of the piece being bent. Test it with the wet finger, when it sizzles it is nearly hot enough, and it is then advisable to test it with a scrap length of Pyralin. This material will not readily burst into flame, but if the iron is too hot, it will smolder and the part in contact with the iron will turn white. A bend which has been made on an iron so hot that it causes the material to smolder, will not be as strong as one made with the correct temperature. When the iron is judged to be hot enough, extinguish the burner, place the Pyralin in contact with the iron along one of the grease marks using moderate pressure. After a few seconds the material will start to bend and pressing it as shown in Figure II will assist greatly. Remove the sheet from the iron and inspect the bend to see if it is at right angles, if not, it is not necessary to return it to the iron as it is possible to bend it after removal from the heat. If it does not bend further, it must be returned to the iron and the bending completed.

Du Pont Household Cement in the tube is suitable for cementing the overlap. Apply it generously and press the overlap against the side, then turning it overlap down, Figure III, place under pressure over night. A piece of wood may be placed over the join, and two weights on each end will afford sufficient pressure.

After the overlap has dried, the bottom is cemented on by the follow-

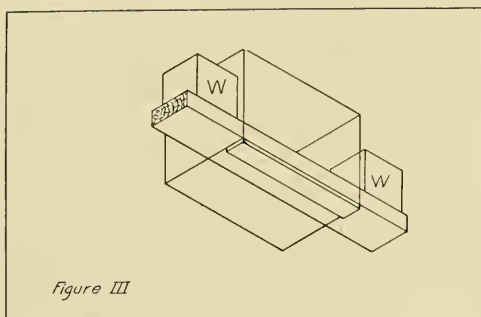


Figure III

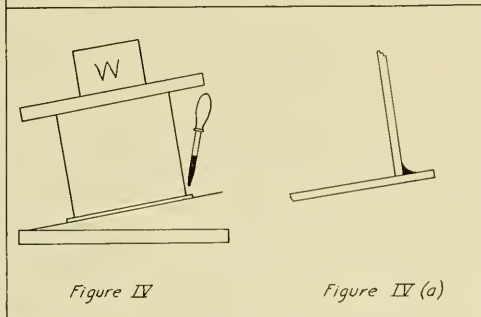
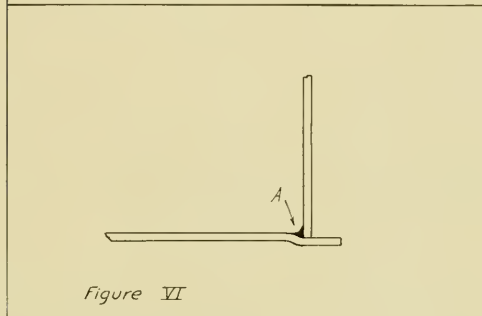
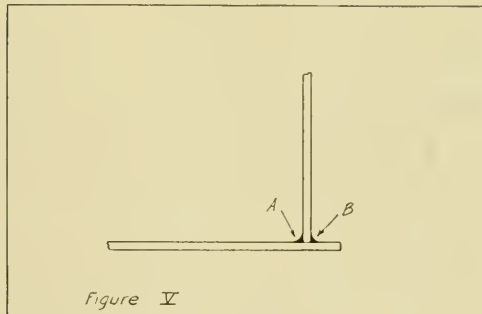


Figure IV

Figure IV (a)

ing procedure. Place the bottom on an inclined surface, Figure IV, and then place the sides on top of it. A weight placed across the top by means of a piece of wood, as shown, will prevent the side piece from moving. Test the contact between the edge of the side wall and the bottom with a thin wire or a piece of paper. If the surface on which the tank is standing is even and smooth, good contact will be obtained, but if an end is not in contact, shifting the position of the weight towards that end will bring the edges together. We are now concerned only with the join along the highest part of the incline and only that edge will be cemented at this time. With a medicine dropper, fill the join with cement along its entire length. The purpose of the incline is to enable us to apply sufficient cement so that it will appear similar to Figure IV (a). Allow the tank to remain undisturbed for at least six hours, or if care is taken not to lift it off the incline so as to strain the cemented edge, less time may elapse before the cementing of another join. Turn the tank on the incline so that another side is uppermost, and apply cement as before. This matter of waiting for the cement to dry may seem tedious, but if a number of tanks are in progress, all in different phases of the construction, as will undoubtedly be the case, there will be plenty of work to keep one busy. When all the edges have been treated by the application of the cement on the outside edges, it will be noted that the thin cement has entered between the side edge and the bottom and joined them together. To insure a perfect job and to cement any places that may have been missed, a few drops of cement are now applied between the inside edges and flowed around the four sides by tilting and rotating the tank. Replenish the dropper with cement as required.



The regular motion picture cement is entirely satisfactory for this work. one ounce being sufficient for a number of tanks. For those who would like to make their own cement the following formula is suggested:

FILM CEMENT

Acetone, tech.	1 part
Ether, tech.	1 part
Amyl Acetate, tech.	1 part
Scrap Celluloid	q. s.

Do not add too much celluloid, or Pyralin; the cement should flow freely. If it is too thick, it will not enter between the edges of a join and cement them.

To add strength to the cemented joins, it is advisable to "seal" or reinforce them, especially tanks which are to be handled considerably. If sufficient cement has been applied as directed with the edges in perfect contact, this sealing operation may be omitted. If, however, it is omitted and the tanks leak, they must first be completely dried before applying the sealing solution. This solution is made simply by adding more celluloid to the film cement, or in the above formula, until it becomes a thick syrup and pours slowly from a large-mouth bottle. Some scrap pieces of Pyralin may be dissolved in Amyl Acetate as the sole solvent to make a satisfactory sealing mixture. Place some scrap pieces in a bottle and just cover with the solvent; with occasional agitation they will dissolve. If the solution is too thick, add more Amyl Acetate.

It is important to treat both sides, (A and B, Figure V) of a join

simultaneously. The sealing mixture has a tendency, upon drying, to contract and pull the join into an acute angle. When both sides are treated simultaneously, the pulls counteract each other. If only one side is treated, A in Figure VI, the bottom will be pulled up as shown, and if all four sides are treated on either the inside or outside only, the bottom will present a warped appearance when dry. The amount of warping is exaggerated in the drawing, but it is apparent to the eye. The writer is using a few tanks which are warped in this manner and no leaks or other deleterious effects have developed. So it is advisable to treat both sides of a join by pouring a quantity of the mixture at one end and allowing it to run to the other. Too much should not be used; the join should appear as shown by Figure V. The tanks are ready for service after the last sealed side has dried.

If cylindrical tanks and other shapes are desired, it may be well to explain the cutting and cementing operations. Circles are cut by using a pair of dividers to make a deep scratch, place a scrap piece of Pyralin under the pivot leg to avoid puncting a hole. Draw other lines out from the circle and break away the portions outside. Other shapes may be made by using French curves and the scribe.

Two surfaces of Pyralin may be easily cemented by pouring the thin cement generously over one and placing the other in contact. It is a good idea to have a blotter underneath to absorb the cement which will ooze out at the edges. Maintain under pressure for at least six to eight hours. In this manner sheets of Pyralin may be built up to any desired thickness for the construction of large pieces of apparatus. Perpendicular joins may be made similar to the cementing of the bottom and sides of the developing tanks. However, the upright piece must be supported perpendicular to the other until the cement dries. To cement the end in a cylinder, either cut it to fit and push it into place, following up with the thin cement around inside and outside edges and the sealing mixture immediately after the cement, or the circular bottom may be cut larger than the cylinder and cemented as described for the rectangular tanks.

Having digested the foregoing, it is a simple matter to indulge in the construction of other and more complicated projects. Special laboratory apparatus could be made and models of most any kind especially models of proposed houses. Here the transparency of the Pyralin is of special advantage, as the interior of such model houses could easily be seen and discussed. In the construction of models, the film cement will afford sufficient strength without having to resort to the use of the sealing mixture, especially if the 1/16-inch thickness is used. For any apparatus which is to be handled considerably or where strength is needed, it is best to use the reinforcing mixture.

Cinema Section

Edited by

William A. Palmer

Titles You Make Yourself

TITLING can either be a pleasure or a chore, depending upon how one goes about the operation. There are many ways of making titles and it cannot be said that any one way is the best or the easiest, because sometimes one method is best for a limited number of titles, while another method is best when there are a great many to be made. To illustrate, there are two general procedures for setting up the lettering in titles you make yourself. One method is to set up the title wording in movable letters made of wood, celluloid, magnetic iron, or other material, then photograph the one title before "distributing" the letters back into their cases and starting on the second title. The opposed method is to letter all the titles on cards before setting the camera up and then doing the photography of all cards at the same time. If a great many titles are to be made, the former method becomes rather irksome because of the length of time required to complete a single title, but for an occasional title or two it certainly is much easier than going through all the trials of printing a card and then photographing it. The only way, though, to determine the best way of proceeding in a title job is to understand the steps involved in the several different methods and then decide which is best suited to the problem at hand.

Regular Laboratory Service

First, before going into the intricacies of making titles yourself, let us remind you that very satisfactory and inexpensive titles can be obtained from regular cine laboratories like those of Eastman Kodak, Agfa, Bell and Howell, and other companies. These titles are for the most part standardized with a simple, easily read type face against a plain black background. Some companies, like Bell and Howell, have a number of backgrounds which can be chosen for the letters. Others, like Eastman, supply only the plain background, but will embellish the card with ruled bars at top and bottom. In general, these titles are thoroughly satisfactory and require no more trouble on your part than to write out the title wording and specify the type of background, if any, and color of film stock. (It is regular practice to supply titles on clear base for black and

white pictures and on colored base, either purple or blue, for splicing in Kodachrome pictures.) These professional sources of titles are mentioned here at the start of a discussion of "how to do it yourself," because it is frequently a very good plan to spend some home talent and considerable energy in making a few main titles for a picture and then let the regular processing laboratories do the drudgery of the run of the mill sub-titles where fancy effects are not desired, but just simple clarity. In other words, let your genius show itself in a few special opening titles and let the professionals do your chores with the main body of minor titles.

The Main Title Is a Show Window

The first impression of a film, created by its main title, is very important and it is, therefore, worth while spending a good deal of effort toward putting on a fine display at the start to lead the audience into the picture with a receptive mind. Just as a shopkeeper decorates his front show windows to attract shoppers, so the main title can improve the impression which your films will give if there is a little originality shown. The present-day Hollywood producers go to great pains to dope out elaborate opening titles, some of them spending fabulous sums for the background effects. Perhaps the all-time high in professional circles was for the main titles of "Cavalcade" which required hundreds of costumed actors, a huge special set with a backdrop for the "special effects" process which measured some 100 by 200 feet, and practically all the available generators and lighting equipment in Hollywood.

Fortunately such elaborateness is not at all necessary for tricky and interesting titles. In fact many of the best effects can be obtained by very simple means. We shall suggest a few which in turn may cause your imagination to conjure other variations.

Fancy Backgrounds

There are two general ways in which titles can be dressed up, one is by putting in some special background to the lettering and the other is by causing the lettering itself to do tricks. But first of all let's take the matter of backgrounds.

The simplest type of special title background for "art titles" as they are sometimes called, is a still enlargement of some scene which is suitable for the mood of the picture. These can be obtained in a number of ways. One way is to make an enlargement from a single frame of the picture itself, letter the title over the enlargement and then photograph the combination with the movie camera. Another source of photographic still backgrounds is from magazines which these days are running many more and bigger photographs.

Another simple type of still background is a texture of some sort such as cloth, preferably of rough weave, or the bark of a tree, or the grain of finished wood. These can also be obtained in the form of still enlargements over which the lettering can be placed, or they can be put into the title by means of double exposure.

"Ah!" says somebody. "There's that double exposure business again, being talked of as if it were duck soup. Double exposures may be all right for those guys who have super cameras with dissolving shutters, focussing prisms, and a wind-back, but what about us poor souls with just a common garden panning variety of movie camera?"

The answer here is that any camera can make successful double exposures. It is true that the ordinary camera can not be used as conveniently as a super-special when just a scene or two in a roll of film is to be double exposed. But double exposure, in principle, is nothing more than running the film through the camera twice, and certainly any camera can do that. All that is necessary, after the film has been run through once, is to rewind the film in the dark and thread it up again. No additional complications need come up if the double exposure work is such that accurate timing is unnecessary. For example, a good plan would be to make a number of double exposed titles, all of the same sort with the same double exposed background, and use an entire 50-foot roll of film. The procedure then would simply be to photograph all the title lettering first for the different titles and then rewind the entire roll and expose it completely the second time to the chosen background. The title cards in this case would consist of the title lettering alone in white, against a plain black card. The background can be another card with special art work, an enlarged photograph, or any "live" movie scene.

Moving Backgrounds For Titles

By far the most interesting backgrounds for titles are actual scenes in motion over which the title lettering has been double exposed. Anyone who hasn't tried such, certainly has a thrill coming, for it certainly makes the amateur feel a "professional" pride in his cinematographic skill. The method of making such titles offers no complications with any camera if the "timing" is not too important. This is because most ordinary cameras do not have a positive geared footage counter but merely a small arm which rests on the diameter of the feed roll and indicates approximately the number of feet in the roll. The indication may not be the same for the identical point on the roll when it is exposed the second time, so it is a little risky to try to locate a certain scene in the middle of a roll over which to double expose a title. It is, however, entirely feasible to make the first scene on a roll a double exposed title because there is a reference point on the film. One can thread up the camera and run the protective leader off in the usual way (either by counting ten seconds or by referring to the marking of the footage counter as directed in the camera's instruction book). With Eastman film stock, one can remove the lens of the camera after loading and then run the mechanism while watching the film in the aperture. At the end of the protective leader there is a series of punched identification numbers which will appear, making an infallible reference point for the start of the unfogged part of the roll. If, then, the first scene of perhaps 10 to 15 feet is made to be a double exposed title, the footage meter, no matter what type it is, will be sufficiently accurate.

Here is the typical procedure for a double exposed title: We will suppose that the title card is prepared by one of several methods of lettering or that a title board with movable letters is available. The title card will have white letters against a black background. It will be set up, the camera aligned and focussed and the exposure made, allowing at least a full second screen time for each word of a title. It is necessary to run a title with a moving background a little longer than one with a still background because of the distraction that the background gives. Then having removed the film from the camera and rewound it to the start in the dark, the background can be photographed. There are two points to be observed in photographing the background. First, it is absolutely necessary to use a tripod, for while there may be some motion natural to the

scene, it is very disturbing to see fixed objects such as features of scenery moving with respect to the title letters. Second, it is necessary to expose the background slightly less than the same scene would require when photographed normally. This last is to insure that the highlights of the background will not be too bright to compete with the white letters of the titles. If one wishes, the title lettering and background can be photographed in the reverse order, shooting the background first and then exposing the letters.

There are two general types of scenes which are suitable for moving title backgrounds. One consists of general scenic views and long shots which set the scene for the picture to follow. The other type can be classed as close-ups of moving objects which apply to the film subject to follow. For example, the main title of a vacation film in the mountains might be double exposed over a magnificent vista of the distant mountains framed in foreground trees, or it might be double exposed over a close-up of a mountain stream.

In the class of suitable close-ups for title backgrounds are scenes of water in all conditions. The rushing mountain stream can be replaced with the calm ripples of a lake or the rolling breakers of the seashore. Close-ups of vegetation, particularly flowers and grasses silhouetted against the sky as they gently sway in the breeze, are most attractive. For a travel film, a background of rotating wheels of an auto or train can be used to advantage. Then there is a great group of close-ups and extreme close-ups which cannot be recognized as a definite object but merely make an interesting pattern or movement. In this class are various startling effects which can be obtained in color by the use of colored gelatin and cellophane.

This last can be arranged as follows: Obtain some variegated gelatin from a supply house that sells theatrical lighting equipment. The vari-colored gelatin comes in different sheets about 3 feet square, some of it with regular stripes of different colors and some with the colors in irregular blobs. If you can't get this particular kind of gelatin, you can improvise similar sheets by getting sheets of plain colors and cutting them up into various geometrical shapes which can be laid together to make a sort of jig-saw puzzle. These vari-colored sheets are then set up and photographed by transmitted light. This can be conveniently arranged by setting up a projector screen, flooding it strongly with white light and holding the colored sheet up before the camera about three or four feet back from the screen. The camera then will be photographing the illuminated screen through the colored sheet of gelatin. It is usually not desirable to have the sheet in perfect focus or even near focus, for a blurring of outline of the colored sections makes the effect better.

Having mounted the vari-colored sheet to be photographed by transmitted light, the camera is then operated while a *second similar* vari-colored sheet of gelatin is slowly passed in front of the camera lens. The second sheet can be within two or three inches of the lens while the first sheet is some two or three feet away. The resulting background effect is a beautiful, kaleidoscopic display which looks as if it were much more complicated to achieve than it is. The spacing of the two sheets is not at all critical and slightly different effects can be obtained by varying the distances.

Next month we shall continue the "special title" talk by discussing various ways of making the title lettering have unusual motions. We shall also take up the matter of determining title exposures and methods of centering titles accurately.



Cedric Wright, Berkeley, Calif.

First Award Advanced Class

■ This picture clearly shows that its maker has a fine feeling for graphic values, a sound appreciation of what constitutes good photography, and the technical skill to carry out his ideas. We feel confident that the photographer has made the most out of his material, and that is high praise indeed.

We see a great many pictures of this kind and it is surprising how few of them are at all successful. Let us look at this picture in the light of the two principal shortcomings which are most commonly found in photographs of such material. Commonest failing is the lack of a base to support the spreading branches. Notice how the horizontal log and the heavy trunk which swings upward from the lower left, perform that function in this picture. Cover up the lower quarter of the print and observe how unstable and insecure the remainder appears. A great many tree pictures are presented with just such a weakness. Second common shortcoming is the failure to find an interesting movement of line and a satisfactory pattern in the material shown. Often the tree selected is not sufficiently interesting to constitute good picture material; sometimes the camera angle is poorly chosen; sometimes the lighting is wrong. Notice how intrinsically interesting this material is; how the camera angle makes use of the curved trunk

(Continued on page 237)



"Tiger Cat"
Carl Zeigler,
Chicago, Ill.

Consequently there does not appear to be any excuse for blowing the head up to mammoth proportions. On the other hand we do not have such an intimate knowledge of such a small thing as a cat's head. A great enlargement in this case can reveal things to the eye that have hitherto remained unnoticed. When that is the case there is obviously much greater justification for presenting one's subject in greater than life size.

Data: 5 x 7" Deardorf camera; Schneider lens; Agfa Super Pan Press; flash bulb exposure; 13½ x 16½" print.



"Over the Top—Maybe"
R. B. Stewart,
Yellow Springs, Ohio

Second Award

Advanced Class

■ This is an excellently handled cat portrait, made rather startling because the head is presented almost three times life size in the 13½ x 16½" print. We do feel that we would like to see the eyes just a tiny bit higher in the picture space, to get them definitely above the center of the print. This could only be accomplished by adding to the base of the print or by placing a smaller image higher in the picture space for it is impossible to trim from the top.

There has been considerable criticism of the practice of showing things in larger than life size on the basis that such presentation appears ostentatious and vulgar. Our feeling is that such criticism must be tied down to specific subject matter before it can mean very much. When the human head is shown in greater than life size one often gets the impression that the photographer is simply showing off his ability to make a considerable enlargement. We can see all there is to see of such a head in a normal size print.

Third Award

Advanced Class

■ This picture will be familiar to most of our readers for it has been used extensively in Rolleiflex advertising and been widely exhibited. The effect of the picture, of course, derives from the amusing predicament in which the young lady has been caught. The photographer can learn much however by observing that the story is told here in the simplest possible fashion. Just recall how similar stories are usually photographed. The photographer ninety-nine times out of a hundred concentrates his attention on the model's face and tries to conjure out of it an expression sufficiently violent and peculiar to pass for anger, horror, or embarrassment as the case may be. Result, the expression is seldom convincing and the observer's attention is diverted from the real story telling elements, such as are shown here, to the face of the model.

Data: 11 x 14" Chloro-bromide print.

CAMERA CRAFT

Fourth Award

Advanced Class

■ It is extremely difficult to get the appearance of sharpness in ice formations under a soft lighting, such as was present when this picture was made. Notice that the snow in the same focal plane seems to be better defined than the ice. There is however some falling off of focus due to lack of sufficient depth of field, in both the foreground and distance, so we think matters would have been improved somewhat if a smaller stop had been used. We think this material is well seen as it is shown here, but believe it is fine practice to always try to imagine what improvements might be made in each picture we see. With that idea in mind we note that a higher camera angle would permit the camera to reveal the crevasses which break into the ice form from the right more clearly. This would introduce an element of variation which should add interest to the picture.

Data: 1/100 sec. at F 11, on S.S. Pan., in D-76; 11 x 14" print on E. K. Kodabrom 2N in D-72.



"Winter Mood"
Gunnar H. Kampe,
Chicago, Ill.

Fifth Award

Advanced Class

■ The first thought which comes to mind on seeing this picture is to question the very drastic trimming away of the top of the head. This will appear more disturbing to some than to others. It can be logically defended as a means of concentrating attention on the very strong profile, especially so if the hair on the top of the head (or the lack of it) were so disposed as to weaken the profile when the whole head is shown. At any rate it seems clear that this is a trimming which is at least radical enough to appear definitely objectionable to the conservative minded. We think that if the reader returns to the picture occasionally after the first shock has worn off he will find the trimming less bothersome and will obtain a fuller enjoyment of the fine rendering of the profile. We do not like the falling off of tone value in the lower left, for this tends to weaken the base in support of the head. Some dodging in plus touching out of the white collar is indicated.

Data: 4 x 5 Auto Graflex; 3 1/4" Celor F:5 lens; exposure in bright sunlight; 8 x 10" print.



"Rolf"
Virna Haffer,
Tacoma, Wash.



"Old Stockholm"

Alan C. Johnston, Dallas, Texas

First Award Amateur Class

■ Mr. Johnston selected just the right time of day for taking this picture, for the angle at which the sunlight strikes through the arch gives a very interesting shape to the sunlit portion of the print. Notice how nicely the two figures are placed so as to help carry the eye onward. The "pull" of the two figures is very successfully controlled through contrast; the nearer and larger figure presenting much less contrast to its surroundings than is the case with the smaller one. It is plain that if this situation were reversed the nearer figure would be much too strong and the movement of the eye into the picture space would be hampered.

Observe how well the tone values have been held in this rather long scale subject. There is ample shadow detail, and only a little blocking up of the highlights in the vicinity of the more distant figure. Such results are obtained through full exposure and restricted development, or even more effectively through resort to the new P. & H. process.

Data: Contax; 50 mm. Zeiss Sonnar F:2; 1/50th sec. at F:8 on E. K. Panatomic film; no filter; bright sun about 4 P.M. in Sept., in Sweden; 10 x 13" print on E. K. Opal H in D-52. Mounted prints may be obtained at the price of \$10.00 on application to Camera Craft.

Second Award

Amateur Class

■ This picture will repay careful inspection for its most interesting qualities are very subtly presented. Notice particularly the zig-zag course which the eye takes in moving through the picture space. This begins with a movement to the left along the lower edge of the dark reflection in the water. It then swings to the right along the upper edge of the same reflection to the point of emphasis in the group of cattle; swings to the left along the ravine and then continues the same movement through several changes, along the clouds. Observe also how nicely the clump of trees near the left edge of the print balances the dark masses on the right. This small area of dark tone is able to balance much larger areas because of its isolation and its nearness to the edge of the picture space.

Data $2\frac{1}{4} \times 2\frac{1}{4}$ " Korelle Reflex; Zeiss Tessar lens; $\frac{1}{25}$ th sec. at F:11 on Agfa Finopan with yellow filter; $9 \times 10\frac{1}{2}$ " glossy print.



"Salinas Valley"
Paul E. Maimone,
Oakland, Calif.

Third Award

Amateur Class

■ We feel that Mr. Chandler deserves much credit for seeing a very interesting design in this material. It takes a picture eye and an understanding of design to make such discoveries. Observe how the two strong diagonal lines which run through the print are both checked at the upper edge of the picture space by dark masses. Notice how this checking of the directional force of the lines keeps the eye from running out of the print. The extreme right portion of the picture is rather weak as things are so we feel that the compactness of the design can be improved by trimming about one half inch from the right as the picture is seen in reproduction. This still leaves the smoking chimney slightly to the left of center so that the feeling of movement within the design is not destroyed.

Data: $10\frac{1}{2} \times 13\frac{1}{2}$ " bromide print.



"An Oblique View"
W. L. Chandler,
Richmond, Va.

Fourth Award

Amateur Class



"Vortex"

Rockwell Hall Smith,
Richmond, Va.

■ The marvelous feeling of movement within this cloud form will be apparent to all. What we must learn to understand and appreciate is the very great importance of this concept of movement in all the pictures which we make. It would be difficult to discover a truly successful picture which did not have this quality to a marked degree. It is deliberately kept to a minimum in an absolutely symmetrical composition, but with that exception the more strongly this quality can be brought out the more successful the picture is likely to be. Study good pictures and try to feel as keenly as possible the way in which the eye swings through them. Observe that different kinds of movement bring about different psychological reactions in the observer. A graceful swinging movement has a sensuous quality; a jerky zig-zag movement is forceful and harsh. In composing your pictures look carefully at the nature and extent of the movements which are set up. It is hardly an exaggeration to say that

a well controlled movement of the eye within the picture space is the key to the whole problem of composition.

Data: Rolleicord; Zeiss F:4.5 lens; 1/5th sec. at F:8, on E. K. Panatomic X in Edwal 12 with Wratten G filter; 11 x 14" print on Kodabrom G-2, in D-72.

Fifth Award

Amateur Class



"Lost Timbers"

Victor Beaumont,
Sacramento, Calif.

■ In speaking of the previous print we emphasized the importance of the concept of movement. Notice how the strong straight lines set up by the timbers converge to a point of emphasis and how this movement is combined with a very delicate "S" curve movement set up in the snow. This movement is begun by the line in the snow which swings upward and to the left from the lower right corner; it turns to the right along the timber and the curve back to the left is just barely suggested by the disturbed snow in the background. It is this combination of

movements which make the picture interesting. The fact that they direct the eye to the point of emphasis and permit the eye to repeat the performance makes for a successful composition. We feel that slightly deeper printing would give this picture the punch that

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Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Carl Zeigler and Gunnar H. Kampe, for the Fort Dearborn Camera Club; Cedric Wright for the Miniature Camera Club of Oakland; and R. B. Stewart, for the Yellow Springs Camera Club.

The following won prizes for their clubs in the Amateur Class: W. L. Chandler and Rockwell Hall Smith for the Camera Club of Richmond; Alan C. Johnston, for the Dallas Pictorialists; Paul E. Maimone, for the Miniature Camera Club of Oakland; and Victor Beaumont, for the Sierra Camera Club.

The following prize winner has no club affiliation: Virna Haffer.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)	Jefferson City Camera Club (Mo.)
Calgary Photographic Society (Canada)	Light & Shadow Club (San Jose, Calif.)
California Camera Club (San Francisco)	Long Island Photographic Society (Flushing, N.Y.)
Camera Clique (St. Louis, Mo.)	Los Angeles Camera Club (Calif.)
Camera Club of Richmond (Va.)	Midwood Camera Club (Brooklyn, N.Y.)
Camera Guild of Cleveland (Ohio)	Miniature Camera Club of New York
Cincinnati Camera Club (Ohio)	Montavilla Camera Club (Portland, Ore.)
Dallas Pictorialists (Texas)	Monterey Peninsula Camera Club (Pacific Grove, Calif.)
Dayton Photographic Society (Ohio)	Newport News Camera Club (Va.)
Detroit Camera Club (Mich.)	The Pack Rats (Pasadena, Calif.)
Detroit Miniature Camera Club (Mich.)	Photographic Society of San Francisco
E.P.I.C. Pool of San Francisco	Pictorial Fellowship (Long Beach, Calif.)
Florida Camera Club (Tampa, Fla.)	Rothschild's Camera Clinic (Los Angeles, Calif.)
Fort Dearborn Camera Club	Schenectady Photographic Society (N.Y.)
Fotoklub Zagreb (Yugoslavia)	Springfield Camera Club (Ill.)
Greater Pittsburgh Photographic Society (Pa.)	Taft Camera Club (Calif.)
Indianapolis Camera Club (Ind.)	

STANDING OF CLUBS

Large Clubs Advanced Class		Large Clubs Amateur Class	
Fort Dearborn Camera Club.....	29	Camera Club of Richmond.....	5
Indianapolis Camera Club.....	11	California Camera Club.....	4
Pictorial Photographers of America.....	6	Miniature Camera Club of Oakland.....	4
Miniature Camera Club of Oakland.....	5	Indianapolis Camera Club.....	1
Fotoklub Ljubljana	4	Sierra Camera Club.....	1
Fotoklub Zagreb	3		
Small Clubs Advanced Class		Small Clubs Amateur Class	
The Pack Rats.....	4	Dallas Pictorialists	12
Yellow Springs Camera Club.....	3	E.P.I.C. Pool of San Francisco.....	12
The Camera Clique.....	2	Florida Camera Club.....	2
Aluminum Camera Club.....	1	Midwood Camera Club.....	1
		San Jose Camera Club.....	1

(Continued from page 231)

as a leading line; how this movement is opposed to the movement in the branches; how nicely the material fills the picture space without awkward blank areas. Study this picture and compare it with your own efforts along similar lines.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ Speed Graphic; Goerz Dagor with Pola-Screen; E. K. S.S. film in D-7; $8 \times 10''$ print on E. K. Vitava Projection Glossy, in Amidol. Prints may be obtained at the price of \$10.00 upon application to Camera Craft.

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it now lacks. Because of the light tone about the edges and because the edges are cut by strong lines at various points, a black border would help.

Data: Recomar 33; $1/10$ th sec. at F:32, on E. K. Panatomic X in DK-20 with K-2 filter. $11 \times 14''$ print on E. K. Kodabrom in D-72.

Correspondence*

Weston

Dear Sirs:

... Now I want to renew it [subscription] as of the first of the year, if you have back copies available. The reason for this is that I want my own copies of Mr. Weston's articles and especially his magnificent photographs. I should like some of the original prints but your excellent reproductions will have to be the next best thing. There is an important lesson for many of us in the beautiful things Mr. Weston is able to see in simple subject matter.

Sincerely,

H. C. Benedict.

January, March and April issues can be supplied. February is out of print.—Ed.

Dear Sirs:

Camera Craft is a beautiful and clean cut piece of magazine artistry and I am glad for the world that you are giving two such extremes as Mortensen and Weston. They are both masters of line and technique, and of their own way of saying what they believe to a much harassed world of the camera.

Sincerely,

Anne Brigman.

I. Q. Sessions

Dear Sirs:

We would also take this opportunity to commend you on the quality of your publication, which so many of our members have found of the greatest value in clearing certain knotty problems which have arisen in the past few years.

At our informal meetings, which are held at the club rooms every two weeks, back numbers of "C.C." are dug up, and we have an I.Q. session, which more and more of our members are discovering, is a most fascinating way of increasing their Photo-lore, and spending a pleasant evening, among the best of company, although the loud voices sometimes raised in violent argument would lead a stranger to believe the very opposite.

Yours very truly,
MONTREAL CAMERA CLUB,
M. Hartman (Sect'y.)

Looking Ahead

Dear Sirs:

Have you ever stopped to think how busy the CANDID CAMERA BUG will be in his home—when TELEVISION BECOMES A NATIONAL DOMESTIC AMUSEMENT?

This might serve as a good hint for a cartoon, or a photograph (studio made) depicting the future; the future—in regards to camera and radio.

Sincerely,

William H. Reiser.

The quality of a televised image, like a projected motion picture image, depends upon "persistence of vision." A still photograph of such projected images loses tremendously in quality.—Ed.

Competition Comment

Dear Sirs:

Spring vacation has made my response to your award (Third Award—Advanced Class, April issue) rather belated. Will you accept my appreciation and thanks at this late date? I enjoy "Camera Craft" each month, and the prospect of receiving it without looking for it is enjoyable.

I have an idea concerning the criticism of the print submitted which follows, and from here you may dump the letter into your basket, or not, as you choose, but it is an idea. A picture to me is a moment of a living incident, mostly for the purpose of holding memory to undistorted accuracy and completeness. I see the motion of the events preceding and following the moment of exposure, the color of the light, the sound of all things involved, in fact, the experience is complete again, living.

In the more remote Navaho country, I can not have a Navaho move over as a model or pose in some manner in order to build up an S curve or establish a triangle, to cite an extreme. The Navaho will not. Neither would I; for the construction of such a composition would have no part in a living event. In other words, such making of a picture drops to the level of still life or table-top photography. And that brings me to what I have to say:

In the pictorial analysis of a picture, rules of composition should follow primarily the interest and purpose of the picture. If one judges all he sees from the same general basis, he will be about as sound as I would be if asked to judge a still life composition. The making of a picture, the composing of items to suit the demands of form or mass arrangement, is one thing,—and I envy such skill and artistry. The taker of a picture, the recorder of a part of an incident, is another thing. He may be called a realist, a snap-shooter, a you-punch-the-button-and-we-do-the-rest-guy, or what you will because his interest is as unflagging and indestructible as those of the other type.

The critic comes in for more than all of the rest of us, for he gives it to one and gets it from all even when he uses syrup. I have been urged to write as I have because I have read with interest for many years the writings of critics, and have felt that the grounds for most criticism are too narrowly confined to the formal rules that perhaps should apply to the arrangeable objects of table-top photography.

In conclusion then, my belief is that helpful criticism lies in the explanation of the reason why any picture is deemed worthy of its award, in the exposition of understanding rather than in a what-might-have-been—in last analysis, the appreciation of how well the photographer captured his bit of life and how worth while a bit it was. The finest thing about photography is that when

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

one disagrees with the photographer, the photographer feels gratitude for the interest shown, but no unhappiness over divergent views if he knows himself.

Very truly yours,

Thomas B. Noble, Jr.

Composition can also be achieved by waiting for the moment when things arrange themselves. Do others believe that care in composing removes those qualities which Mr. Noble desires in his pictures?—Ed.

What Is Your Photographic I. Q. ?

Give yourself the following test and determine your Photographic I. Q. Read the statements given below and check the correct answers. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good, 80%; good 70%; fair to bad, below 70%. Compare your answers with those on page 243.

1. If a purple discoloration was found on a print, in all probability it could be attributed to:
 - ☐ Weak developer
 - ☐ Exhausted short stop
 - ☐ Improper fixation
 - ☐ Safe light leak
2. Which one of the following photographic axioms is incorrect:
 - ☐ Too much development and too little exposure gives excessive contrast
 - ☐ Give full exposure with flat subjects
 - ☐ Develop for the high lights
 - ☐ Expose for the shadows
3. When the bellows of a camera is greatly extended, as is the case when making extreme close-ups, the *f* value of the lens is:
 - ☐ Unchanged
 - ☐ Increased
 - ☐ Decreased
 - ☐ Uncertain
4. Prints are frequently given a glycerine bath to overcome their tendency to curl. This bath is usually made of one part of glycerine to:
 - ☐ 1 part water
 - ☐ 5 to 10 parts of water
 - ☐ 50 to 60 parts of water
 - ☐ 90 to 100 parts of water
5. At times a negative is said to have a "ghost." Reference hereby is made to:

- ☐ Developing stain
- ☐ Chemical fog
- ☐ Lens flare
- ☐ Mesmerism

6. On the Fahrenheit scale water freezes at 32 degrees and boils at 212 degrees; on the centigrade it freezes at 0 degrees and boils at:
 - ☐ 100 degrees
 - ☐ 112 degrees
 - ☐ 180 degrees
 - ☐ 200 degrees
7. Of the four colors named below check two to which the human eye is most sensitive:
 - ☐ Yellow
 - ☐ Red
 - ☐ Blue
 - ☐ Green
8. When movie films are edited and it becomes necessary to splice the film, which of the following takes place:
 - ☐ Film ends are glued together
 - ☐ The emulsions are melted together
 - ☐ Extreme pressure forces the ends together
 - ☐ The film bases are fused together
9. A print is ferrotyped so as to:
 - ☐ Keep it from curling
 - ☐ Increase its luster
 - ☐ Change its tone
 - ☐ Increase its life
10. Here is the most difficult question of the lot: The following are names of anastigmat lenses, yet one name or type is inconsistent with that of the rest. Can you name it?
 - ☐ Turner-Reich
 - ☐ Dagor
 - ☐ Tessar
 - ☐ Protar

Club Notes

Forthcoming Exhibitions

Northern New York Photographic Salon. Address The Watertown Camera Club, The Flower Memorial Library, Watertown, N. Y. Closing date May 1, 1939. Entry fee 50c, limit four prints to photographers residing in Northern New York. May 15 to 31, 1939.

Western Photo Show, sponsored by the Los Angeles Camera Club. Address Los Angeles Camera Club, 2504 W. 7th St., Los Angeles, California. Closing date May 1st, 1939. No entry fee, but postage must be enclosed for return of prints. Limit four prints for each division. Divisions: pictorial, portrait, illustration, candid, documentary, color, scientific,

miscellaneous. Competition is limited to those residing West of the Mississippi River. May 19, 20 and 21, 1939.

Fourth Anthracite Photographic Salon. Address Miss Elizabeth Taylor, Salon Director, Everhart Museum, Scranton, Pa. Closing date May 1st, 1939. Entry fee \$1.00, limit four prints. May 13 to June 3, 1939.

Second Tri-State National Salon of Photography. Address Salon Committee, Burlington Camera Club, 216 Eisfeld Bldg., Burlington, Iowa. Closing date May 8, 1939. Entry fee \$1.00, limit four prints. May 22 to 28, 1939.

2nd Annual May Salon of the Springfield Camera Club. Address T. C. McMillen, Y. M. C. A., Springfield, Ohio. Closing date May 8, 1939. Entry fee \$1.00, limit four prints. May 15 to 22, 1939.

Portsmouth Camera Club's 44th Annual Exhibition of Pictorial Photography. Address Hon. Exhibition Secretary, 54 Hyde Park Road, Southsea, England. Closing date May 10, 1939. Entry fee 2/6 plus return postage, limit 6 prints. May 10 to June 7, 1939.

Eighth Detroit International Salon of Photography. Address Secretary Detroit Institute of Arts, Detroit, Michigan. Closing date May 17, 1939. Entry fee, \$1.00; limit 4 prints. June 6 to 30, 1939.

Sixth Annual and Third International Photographic Competition and Salon. Address Marshall Field & Co., Chicago, Ill. Closing date May 19, 1939. Entry fee \$.50, limit four prints. Three divisions: Candid, Amateur and Advanced Amateur. Pictures will be exhibited beginning June 9, 1939.

First New Hampshire International Salon of Photography. Address Salon Director, F. L. Evans, 599 Hanover St., Manchester, N. Y. Closing date May 20, 1939. Entry fee \$1.00, limit four prints. June 4-28, 1939.

Newport Tercentenary First Annual Salon of Photography. Address J. L. Goodman, Salon Director, Newport Camera Club, Newport Y. M. C. A., Newport, R. I. Closing date May 20, 1939. Entry fee \$1.00, limit four prints. June 11 to 18, 1939.

Second Annual Salon of Photography. Lititz Springs Camera Club. Address Carl B. Workman, Secretary, Lititz Springs Salon, Lititz, Pa. Closing date June 15, 1939. Entry fee \$1.00, limit four prints. July 4 to 15, 1939.

Whitby and D. P. S. First International Photographic Exhibition. Address Exhibition Secretary, 3 Guisborough Road, Whitby, Yorks, England. Closing date June 24, 1939. July 24 to August 19, 1939.

The Victorian International Salon of Photography. Address Mr. C. Stuart Tompkins, The Junction, Camberwell, E. 6, Melbourne, Australia. Closing date July 1, 1939. Entry fee 5s. Limit four prints. August 7 to 19, 1939.

The Golden Gate International Exposition has been selected as the subject of a prize contest for the members of the Cinema Club of San Francisco, Calif. Pictures will be limited to 400 feet of 16mm. and 200 feet of 8mm.

The Sioux City Camera Club, of Sioux City, Iowa, held their annual exhibition, at the Federal Art Center, from March 10th to April 3rd. One hundred and twenty-five prints were exhibited and the show enjoyed a fine attendance.

The Troy Photographic Society, of Troy, N. Y., meets on the first and third Wednesdays of each month, at the Troy Y.M.C.A. A print competition is held the first meeting of each month. Address communications to Dr. M. M. Berney, 10 Third St., Troy, N. Y.

Plans are being made for an Intercollegiate Photographic Contest on the Pacific Coast. Those interested should communicate with Myron Tribus, 2511 Channing Way, Berkeley, Calif.

A photographic duel was staged recently by the members of the California Camera Club, of San Francisco, Calif. Two members, armed with cameras, were placed back to



Meet the Loser

back and at a given signal walked away from each other. At the command of a referee, they wheeled, set their cameras, focused and clicked the shutters. The winner of the duel was determined, from the finished prints, on the following basis: 25% for first to shoot; 25% for accuracy of focus; 25% for the position of the figure; and 25% for the general merit of the picture. This would seem to be an entertaining way for members to increase the efficiency with which they handle their cameras. The photograph above shows the loser of the duel.

The Huntington Park Camera Club, of Huntington Park, Calif., is an active group of 20 members just entering its fifth year. The group meets in its quarters, at 2334 Mortimer Ave., every Tuesday night.

An Outdoor Sports Show will be held in Tulsa, Okla., from May 11th to 14th, inclusive. A feature of the show will be a photographic contest of sports and outdoor subject matter. For further details write the Tulsa "Tribune."

The Western Photo Show, sponsored by the Los Angeles Camera Club, will be held in the Grand Ballroom of the Los Angeles Biltmore Hotel, from May 19th to 21st, inclusive. One thousand outstanding prints from photographers west of the Mississippi will be exhibited and many prizes will be awarded. William Randolph Hearst has donated, as a perpetual trophy, a beautiful 42-inch gold cup for the best print in the show. For further information write the Los Angeles Camera Club, 2504 West 7th St., Los Angeles, Calif.

Photographers will attempt to expose magicians at the next meeting of the Dayton Camera & Cine Club, of Dayton, Ohio. The members will be allowed free rein at a performance of professional and amateur magicians and will try to expose the legerdemain with fast shutter work.

Camera clubs are invited to exhibit their traveling shows at the Medo Photo Supply Corporation's Store, at 15 West 47th St., New York City. There are forty-four, 16x20", wall-mounted frames suitable for hanging exhibition prints and all shows will be well publicized. Prints will be exhibited for at least one week. Patrons of Medo will vote each week for the outstanding print which will be eligible for a final contest to be held the week of September 25th. Winner of this final contest, also to be selected by popular vote, will receive a handsome silver loving cup. For complete details write the Exhibit Manager, at the above address.

Notes and Comments*

The Eastman Kodak Exhibit at the New York World's Fair will be the focal point of interest to every photographer who visits this spectacular show. The vigorously modern Eastman Building will house an enormous exhibit, symbolic of photography's growth and progress, in the past century. Centering around the most spectacular showing of color photography ever arranged, the exhibit covers every conceivable phase of photography. The Great Hall of Color contains an enormous screen, 22 feet high and 187 feet long, which extends along the entire inner circumference of the Great



Eastman Kodak Co. Building

Hall. Along this screen, in single panoramic views and in groups of pictures, there passes the greatest show of color ever seen. By means of eleven, especially constructed, giant projectors, this ever-changing, amazing show of color is projected on the screen. Space does not permit an even passing mention of the many other displays and demonstrations and it must suffice to say that every phase of photography is brilliantly presented and that the photographer who fails to see this magnificent pageant will miss a marvelous photographic show.

Other important and interesting photographic displays will be offered by the Agfa Ansco Corporation, which will cover various phases of modern photography. There will be a working demonstration of a darkroom, an exhibition of fine salon prints and giant photo-murals. Underwood & Underwood will present a portrait studio, as well as an extensive photographic display. The Universal Camera Corporation, The Keystone Mfg. Co., and the Utility Mfg. Co. will also exhibit photographic equipment.

Amateur camera operators, both still and movie, will face no restrictions at the New York World's Fair, excepting that during big events and ceremonials they will not be permitted to pass certain police lines. Other than this they will have the freedom of the grounds and buildings.

"Exposure Makes The Picture" is the title of a 22 page book just published by the

Weston Electrical Instrument Corp., Newark, N. J. This booklet offers a wonderfully clear explanation of the problems of exposure and the way in which they may be solved by the proper use of the Weston Exposure Meter. The book was written to answer the specific questions asked by thousands of amateurs and all points are clearly explained by text and illustrations. Copies of this valuable book will be sent free upon request to the above address.

A complete course in color photography is being presented in San Francisco, under the direction of Mr. Robert Gries, Mr. James Bishop and Mr. King Middleton, color technicians at Patterson & Hall. Classes are limited to six students and will be held in a studio equipped for color work. Instruction will be given in the making of separations from Kodachrome, direct separations and one shot color work will also be demonstrated. For further information write, Pro Pictures, 16 Vinton Court, San Francisco, Calif.

Films offered free to camera clubs by the Brobeck Film Exchange, 35 E. Wacker Drive, Chicago, Ill. The Exchange offers free, except for shipping cost, a series of talking slide films on various photographic topics. Write for complete details to the above address.

New Automatic Enlarging Easel has just been introduced by the Albert Specialty Co., 231 S. Green St., Chicago, Ill. The new easel is designed for maximum convenience and ease of operation. The easel has gripper-grooves for each size of paper, 5x7 inches, 8x10 inches, and 11x14 inches, and the paper is automatically squared up, centered and held securely in place, regardless of curl. Borders are quickly adjusted to exactly uniform size and the frame locks in upright position when the paper is being inserted, leaving both hands free. The lock releases automatically when the frame is to be lowered. The new Automatic Enlarging Easel is priced at \$9.75.

A Green Filter Flood Lamp is now being offered by the Wonderlite Co., of West Orange, N. J. The new lamp, available in the popular Wonderlite 5-Hour and 10-Hour sizes, provides amateurs and professionals alike with illumination that is ideal for portraiture and other work with panchromatic films. It affords excellent compensation for the oversensitivity of pan films to red by flooding the subject with light that permits stronger registration of yellows and greens. The Green Filter Flood is especially kind to flesh tones, softens skin blemishes and in many instances obviates the necessity of retouching.

The FOTO-SAFE, manufactured by the Angelus Press, 1240 South Main St., Los An-

*The materials and supplies mentioned in these columns are available at your local dealers or may be obtained from the addresses given.



Foto-Safe

geles, is an attractive new type of album for protecting your best prints from soil, damage and loss. Pictures are simply slipped into a convenient, die-cut opening in the page that frames and displays them to best advantage. No glueing or mounting is required. Thus prints can be instantly interchanged without damage. The FOTO-SAFE is of superior workmanship, handsomely bound and finished in modern fabrikoid. Volumes are available for $2\frac{3}{8} \times 3\frac{3}{8}$ inch, $2\frac{3}{8} \times 2\frac{3}{8}$ inch, and $2\frac{3}{8} \times 4\frac{3}{8}$ inch prints. Agents are Craig Movie Supply Company of Los Angeles and San Francisco and Intercontinental Marketing Corporation of New York.

New Zeiss Ikon Filter Mounts for use with new model Zeiss Ikon Cameras have just been introduced by Carl Zeiss, Inc., 485 Fifth Ave., New York City. New model Zeiss Ikon Cameras have a thread cut into the outside of the lens mount and the filter screws onto this, insuring accurate seating for the filter. The new type mount permits a wider flange and there is less danger of marring the filter surface in handling. As the new mount fits snugly over the lens, the camera may be closed with the filter in position.

A new swing base range finder for the Univex Mercury Camera has been announced by the Universal Camera Corp., 28 West 23rd St., New York City. The swing base permits the range finder to be folded flat on the top of the camera or used in the conventional vertical position. Accurate distance readings from 1 foot to infinity that conform with the focusing mount readings on the Mercury.

Prints for the next Leica Exhibit are now being received. Now is the time to prepare and send in your entries instead of rushing them through just before the closing date. Complete rules of entry are available from E. Leitz, Inc., 730 Fifth Ave., New York City.

\$250 in cash prizes, for the best pictures taken with a Kalart Micromatic Speed Flash, have been offered by The Kalart Co., 915 Broadway, New York City. Closing date of the contest is Dec. 1st, 1939. Entry blanks from your dealer or the above address.

Correction. An error appears in the sequence of apertures at the head of the exposure table on page 162 of our April issue. The sequence of apertures should read as follows, from left to right: 1.5, 2, 2.8, 4, 5.6, 8, 11, 16, 22.

Hypo-Sharp, the latest member of the "Sharp" family, is a sure test for the presence of hypo in wash-water. Hypo-Sharp shows the presence of hypo by an instantaneous change from deep blue-black to water-white and easily shows one part of hypo in 50,000 parts of water. This set will insure your plates and films being completely washed. Hypo-Sharp includes all materials for 500 tests, and is available from R. P. Cargille, 118 Liberty St., New York City.

Opeco Concentrate 8 is a new concentrated fine grain developer, presented by the Oxford Products Co., Beverly Hills, Calif. Concentrate 8 is easy to use as there is nothing to add but water; it may be used at temperatures ranging from 65 degrees to 85 degrees F.; 2 ounces makes 24 ounces; it is non-staining and non-toxic, and possesses many other valuable characteristics. A special introductory offer makes a 2-ounce sample (makes 24 ounces of developer) available for only 25c in coin. As the supply of these samples is limited, write the above address at once.

The Aurora School of Photo-Engraving, Aurora, Mo., originator of the "one-man" photo-engraving plant, observed its eighth birthday in March. Started as a "home" industry, with a kitchen as the first factory and a piano bench as the first office desk, Tasope has made rapid strides. Today, after nearly a decade of progress, the Aurora School occupies its own three-story structure and Tasope plants are in use in every state in the union, as well as many foreign countries. Charles S. Martz, founder of the school, is general manager.

A pamphlet describing the Detrola Cameras has just been published by the Detrola Corporation, of Detroit, Mich. This pamphlet completely describes, with text and pictures, the many features offered by this new line of miniature cameras. A copy will be sent to you free, upon request.

New models of the Ihagee Luminax Enlarger have been announced by Henry Herbert, 483 Fifth Ave., New York City. The new models offer several important improvements: the glass negative film holder is now made of metal; the spring arrangement holding the lower housing has given way to a strong metal clip; and a large bakelite handle now fixes the position of the lamphouse on the upright. These improvements will increase the efficiency and ease of operation in the Ihagee Luminax Enlargers.

The Duropods are a new line of tripods, introduced by Henry Herbert, 483 Fifth Ave., New York City, which offer an unusual combination of light weight, sturdiness and long extension. Six different models, ranging from 3 to 8 sections, vary in price from \$3.00 to \$6.00. The Duropods telescope compactly and weigh only 28 ounces. The six section model extends to five feet. A special reversible feature of the legs allows the head to be used for either American or German tripod bushings.

Visitors to the New York World's Fair will have an excellent opportunity to im-

prove their photographic technique by attending the special summer session courses of the Haz-Sanders School of Photography, 719 RCA Bldg., 30 Rockefeller Plaza, New York City. Summer session classes will run from May to October and classes have been arranged to allow students to have their afternoons free to attend the Fair. Field trips will be conducted in the Fair Grounds.

A new monthly house organ has been announced by the Hollywoodland Studios, 9320 California Ave., South Gate, Calif. Temporarily called "Amateur Movie Chatter," the permanent name is now being selected in a contest which closed April 15. "Amateur Movie Chatter" is designed to offer amateur cinefans help and information regarding their hobby. A monthly contest for the best scenario submitted by readers is another feature of "Amateur Movie Chatter."

Plastika, a new Ilford photographic paper, has been introduced by the Medo Photo Supply Co., 15 West 47th St., New York City. Plastika offers an exceptionally long tonal scale, designed to match the modern negative materials. It also gives prints of unusual luminosity and allows considerable latitude in exposure and development.

Klein & Goodman, 18 South 10th St., Philadelphia, Pa., are offering famous cameras on credit. A free booklet describing their Time Payment Plan is available. Cameras are offered for a small down payment, with 12 months to pay.

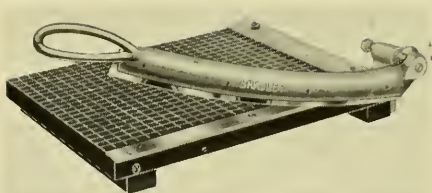
The Master Dodger is a complete dodging set, consisting of a stainless steel dodger holder, five thin press board masks of various shapes and a strip of press board for making special masks. Offered by the Master Dodger Co., Boulder, Colo., for \$1.00.

"The Exposure Meter Manual and Practical Speeds of Films and Plates" is a handy pocket sized little booklet offered by Photo Utilities, Inc., 10 West 33rd St., New York City, for 25c. This little booklet contains an amazing amount of important information presented in a way that makes it easy to understand and to refer to. It contains conversion table for all speed rating systems, important notes on exposure, filter factors, speed ratings for all films and plates, etc.

The Wesco Duo Tripod, manufactured by the Western Movie Supply Co., 254 Sutter St., San Francisco, Calif., presents many important features. It offers a removable camera plug; pan mechanism sealed in oil; legs that may be completely inverted for copying or titling; adjustable base on tripod permits additional height, bringing camera to eye level; and reversible tubular legs, steel and rubber tipped. The Wesco Duo Tripod sells for \$8.50 or with Duo Head for \$16.00, complete.

G. T. Cheshire & Sons, Ltd., announce that they will not be publishing further issues of "The Gallery" after the April, 1939, number.

The new Bradley Trimmer, manufactured by the Milton Bradley Co., Springfield, Mass., offers many valuable features at a moderate price. Available in all sizes up to 18 inches,



Bradley Trimmer

the Bradley Trimmer has a Surfite Top, green in color, which makes the trimmer markings clearly visible under the darkroom safelight. The surface is also waterproof and non-warping. The new Bradley Trimmer has a tension adjustment that eliminates feathered edges; a cam in the gauge that assures cutting at right angles; and the blade is removable for sharpening. The Bradley Trimmer is precision built for lifetime service.

Answers to What Is Your Photographic I.Q.

1. Improper fixation will cause purple discoloration. Prints must be thoroughly immersed and not be permitted to float on the surface of the fixing bath; if this is not done the developer remaining in the emulsion will continue its action causing a purple stain.

2. Give full exposures with flat subjects is incorrect. As a rule it is best to give minimum exposures with flat subjects accompanied by full development, so that enough contrast can be obtained in the negative to give a pleasing print.

3. The f value is increased or it may be said that speed of the lens is decreased. Remember that the ratio of the lens to its focal length determines the f value; consequently if the lens is moved away from the film to a distance greater than its focal length the f value would increase. Actually a lens is extended beyond its focal length when it is focused on anything but very distant objects. At normal camera distances the change in f value is negligible and can be disregarded. When the image is half actual size the f value is changed by approximately one stop. It is plain therefore that if the image is less than half actual size the f values on the lens may be used. When the lens is extended to twice its focal length the image becomes actual size and the f value is changed approximately two stops, requiring a four times increase in exposure.

4. A bath of five to ten parts of water to one part of glycerine is usually employed to prevent excessive curling of prints. The duration of the bath should be about five minutes.

5. A so-called "ghost" is caused by lens flare and is the effect produced by the reflection of rays of light from the lens surface forming secondary images and producing a fogged appearance on the emulsion of the negative.

6. On the centigrade scale water boils at 100°.

7. The human eye is most sensitive to yellow and green; least sensitive to red, blue and violet.

8. The film bases are actually fused together. The emulsion is removed, a film cement is applied which acts as a solvent on the film base, and the two ends are fused or welded together.

9. Ferrotyping is a process whereby a glossy surfaced print is squeezed on an enameled plate and allowed to dry, thereby greatly increasing the luster of the print. The result is that the fine detail in the picture is made to appear more clearly and renders it more suitable for half-tone reproduction.

10. The Tessar is called an unsymmetrical lens while the others are symmetrical. In the latter type the front and rear elements are symmetrical and can be used independently of each other.

CLASSIFIED ADVERTISEMENTS

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◆Recomar 18, F:4.5, Compur, Hollywood shade, K2, wide angle, telephoto lenses, 4 holders, F.P.A., developing tank. All in first class condition, \$40.00 takes everything. Ceres Drug Stores, Ceres, Calif.

◆16mm. Movie Camera, Eastman Model K, 1.9 lens, with case, A-1 condition. Cost \$150.00. Bargain at \$50.00. Paul Woolley, 410 West 43rd, Indianapolis, Ind.

◆Latest Model Leica 111B, F2 lens, new since Christmas, no use for same, cheap for cash. Mary Frost, 304 Jefferson Apts., Saginaw, Mich.

◆Contax II, F2 Sonnar, brand new, never used. Also Leica E, F:3.5 Elmar, like new. Either camera best cash offer. Dr. John Haruff, Hollister, Calif.

OUTFITS FOR SALE

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◆Woman, single, experience in studio, free lance before 30 weeks daily instruction at the Clarence White School of Photography, New York City. Competent to manage studio or do all types of photography. Consider position anywhere after May 15, 1939. Address M. M. C., Care Camera Craft, 425 Bush St., San Francisco, Calif.

◆By young man, single, experienced in commercial operating, also newspaper and darkroom work. Will go anywhere on Pacific Coast. Address H. E. Holst, 60 South 7th St., San Jose, Calif. Telephone Columbia 2816.

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"Sand Dunes, Oceano 1936"

Edward Weston

W h a t I s Photographic Beauty?

Edward Weston

THIS is a question even more difficult to answer than "What Is Art?" Photography, on its hundredth birthday, can hardly be said to have reached voting age. When we set it up as a creative medium in company with such graybeards as painting, sculpture, and music, we have to admit that it is still in its childhood. The most we can say is that it has learned to walk, and learned in spite of what future historians of art will probably term almost insurmountable obstacles.

It is not my intention to add to the handicaps of a youthful art by attempting to answer my title question with a strict definition. In the last analysis no strict definition will ever be possible, even when abundant criteria—now sadly lacking—are at the definer's disposal. For then as now what is one man's photographic beauty will be another man's poison. Granted we can never exactly define this elusive quality, we can, by examining and analyzing the potentialities of the medium, erect a few guide posts on the road to achieving photographic beauty, and enumerate some of its indispensable ingredients.

At the outset we shall have to recognize that photographic beauty is an end to be attained only by photographic means. That may sound like a truism obvious enough to be taken for granted, but if it were a widely recognized fact we would not be faced with the state of confusion that exists today because workers in a distinctly different medium insist on calling themselves photographers and their products photographs.

Photography, unlike photographic beauty, can be defined. The dictionary calls it "The art or process of producing images on sensitized surfaces by the chemical action of light." Clearly then, one who produces all or part of his image by means of pencil, brush, or other manual process, is no longer just a photographer.

I have found that a number of people thought I meant it as a term of disparagement when I suggested the term "photopainters" to distinguish those whose work embraces the two mediums.* That is a mistaken idea I should like to correct. It was certainly not my intention to condemn photopainting as a medium. Sculpture and painting have been combined successfully, writing and music are combined to make song; there is nothing morally or aesthetically wrong in combining painting or drawing with photography.

What is wrong, because it is a waste of time and effort, is the attempt to use these combined mediums to produce photographic results. As long as a photopainter tries to make photographs—even if they are that in name only—he is slamming the door on his own fingers. He is ignoring the rich possibilities inherent in his dual medium and confining his work to a kind of borderline performance that is neither fish, flesh, fowl, nor good red herring, but is as unimaginative and uncreative as it is tedious. It is just as foolish for the photopainter to imitate photography as it is for him to imitate painting. For the *raison-d'être* of photopainting as a means of creative expression can only be that it shall draw on the combined abilities of the two mediums to produce work that neither photography nor painting could produce alone.

Far from condemning photopainting, I believe that with understanding use it might well become a new and vital medium. But there can be no understanding use while photopainting stays tied to photography's apron strings. The mediums are incompatible and a divorce is indicated. In this case a divorce will reap mutual benefits: for photopainters, a casting-off of photographic prejudices, a new freedom in which to explore, discover, and utilize the untouched resources of their medium; for photographers, a lessening of the confusion that now surrounds their aims, means and terms.

So much for what isn't photography; let us now consider what it is and what it can be. If he is to use his medium creatively, the photographer's first requirement is a means of control. Those future historians will recognize that one of the biggest obstacles set in photography's path almost at its birth was the bogey that no control was possible unless the medium was adulterated. Why and how that bit of idle gossip spread, and grew into an authoritative indictment, it will be their task to discover. Sufficient it is for our purposes to refer back to the dictionary definition, where the control proper to photography is clearly indicated. If it is light that forms the image, then it is light that must be controlled. The photographer's basic technical problem is no different from the painter's. Before either can attain any freedom of expression within his medium, he must learn to control the agent that forms his image. The painter's agent may be a brush, a pencil, his fingers, or a number of other tools. The photographer's only agent is light; but a careful study of his medium will show him that this agent is susceptible of control at every step of his process.

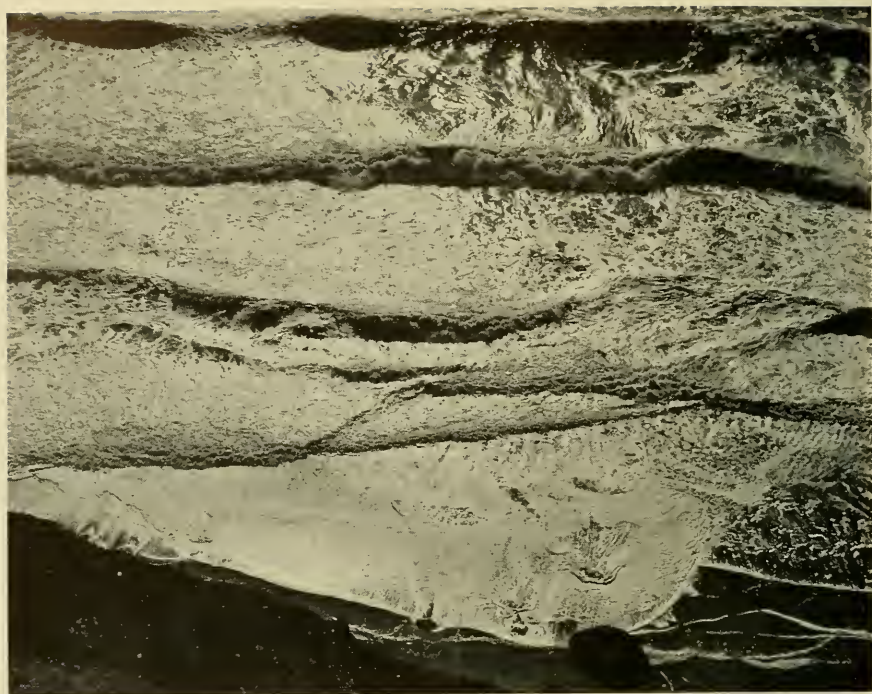
I have spoken elsewhere of light as the photographer's subject matter; equally it is his tool. To learn to control its action with skill and accuracy, in exposure, development, and printing is his primary task. For without

* WHAT IS A PURIST? *Camera Craft*, Jan., 1939.



"Cloud, 1936"

Edward Weston



"North Coast, 1937"

Edward Weston

such control he will not be able to use to advantage the unique properties of the photographic medium.

Every medium has its own unique properties; an artist chooses one in preference to all others because he feels its special characteristics make it best suited to expressing what he wants to say. If he makes his choice and then fails to take advantage of those special characteristics, he will do no creative work. A large number of present day photographers have arrived at exactly that point of self-defeat. Whether they don't know how to use their medium effectively, or whether they know how but don't dare to venture from the beaten path, the result is much the same: It is the effect a pianist would achieve if he restricted his rendering of every piece to just those notes that fall in the middle octave of the keyboard.

This is not to say that it is either necessary or desirable for each photographer to take advantage of all the unique abilities of the medium. Many approaches and destinations are possible; according to the ends they have in view different photographers will emphasize different aspects and capacities of the photographic process. What follows is not the only possible interpretation of photographic beauty. I do not claim it is the best. It is simply my interpretation, based on my own understanding and approach.

To understand this interpretation we shall have to give special consideration to three capacities inherent in photography:



"Death Valley, 1939"

Edward Weston

1. Rapidity of the recording process.
2. Ability to register more than the eye can see.
3. Ability to present an unbroken sequence of infinitely subtle gradations.

These three properties have one common factor: not one of them can be an asset to the photographer until he learns to use it with discrimination.

The rapidity of his recording process determines the photographer's approach. In no other medium can seeing and recording so nearly coincide, and it is to take advantage of this fact that the photographer should work toward an ability to see his finished print on the ground glass. By learning to see in terms of his equipment he is able gradually to eliminate the accidental from his work. At this stage the trimmer is usually his greatest handicap because he is all too liable to convert it into a composing machine. A poor job of seeing can be improved by the trimmer, but it is a far wiser procedure to go back and make the picture right. Corrective trimming will not help to improve your original seeing—rather each reasonably successful amputation will tend to make you more careless of what appears in your negative.

Accepting the arbitrary limits of your frame will gain you an advantage in the long run, though it may make harder work at first. The longer you work with a single film size, the more possibilities and variations you discover for it; the more you learn of its possibilities, the more accurate and

intuitive your composing becomes. Unless your work is to be confined to still life made by artificial light, speed in composing is an important requisite. To work successfully under changing light conditions, when every second counts, the photographer must not only manage his tools with speed and accuracy; he must have such a strongly developed sense of composition that he can get his picture right without wasting time in conscious thought. Naturally long experience is needed to develop this ability—but the task is made that much simpler if you concentrate on one film size, just as it is easier to learn to see in terms of your equipment if you use only one camera, one lens, etc. There is nothing wrong with premeditated trimming when you do find subjects that cannot be handled any other way. But if you concentrate on learning all the possibilities of your full film size, the occasions when you must compose with trimming in view will become rarer as you discover how to present more and more material within your given frame.

When the photographer has learned to compose his picture on the ground glass, the rapidity of his recording process becomes a major asset because it enables him to record at the moment of deepest perception, to isolate the one moment when his subject stands most clearly revealed.

Second among the unique properties of the photographic medium, comes the camera's ability to see more than the eye sees—to see differently. Far from recognizing this as an advantage, many people practice and criticize photography on the basis of its supposed ability to copy nature, that is, to represent nature as the eye sees it. Yet to reproduce natural objects or scenes in terms of human vision, is a feat far more easily accomplished by the painter than it is by the photographer.

Compared with the camera, the human eye is a decidedly inferior instrument. To mention but a few of its imperfections, its lens is one that would be rejected by the cheapest camera maker; the screen on which its image is projected is not everywhere at the focal length of the lens so that blurring at the edges is inevitable; to get a print, this image must be relayed to the brain over a devious route by separate nerve fibers each of which transmits but a small section of the picture area, and having done so must stop and rest before resuming its work. It is the brain's task to reassemble and make sense out of this hodge podge, and to the brain goes all credit for the degree of success achieved with such faulty tools.

The human eye, backed up by the human brain, can still never duplicate the seeing of the camera's eye. It cannot focus on more than a few objects at once and is constantly jumping from place to place in an attempt to take everything in. The camera's eye sees more at once and sees it more clearly. In sorting the images provided by the eye, the brain automatically eliminates some as of no importance and emphasizes others, according to its individual conditioning. The impersonal camera eye makes no such distinctions. Inside certain wide limits it records every detail within its angle of vision, however complex or chaotic the subject may be.

If the photographer attempts with this superior and impartial recording instrument to duplicate the short-comings of human eyesight, he is wasting its most important ability. For the camera is capable of enlarging human vision by revealing the world in new terms and new dimensions. To



"Potato Cellar, Lake Tahoe, 1937"

Edward Weston

take advantage of its penetrating seeing-power the photographer must develop an exacting control. He must learn to distinguish important detail from meaningless detail, and guide his camera eye accordingly.

From the rapidity of his recording process we have established the essential point of the photographer's approach—seeing in full before recording. From the camera's superior seeing power we have established his field of action—to record in terms of more than human vision. These two functions combine to give him a means of expressing one of the most powerful and appealing qualities possible in a photograph—the quality of authenticity. The observer's reaction to it is described by Beaumont Newhall in "Photography 1839-1937."

"Unconsciously we are convinced that if we had been there we would have seen it exactly so. We feel that we could have touched it, counted the pebbles, noted the wrinkles and found it identical. We have been shown again and again that this is frequently pure illusion, subjects can be misrepresented, distorted, even faked. We know it, and even delight in it occasionally, but the knowledge cannot shake our implicit faith in the truth of a photographic record."

But no intentional misrepresentation, distortion, or faking is needed to make the belief on the observer's part that he would have "seen it exactly so," a mistaken one. For, as we have already shown, the human

eye is utterly incapable of duplicating the camera's seeing. The photographer's power lies in his ability to re-create his subject in terms of its basic reality, and present this re-creation in such a form that the spectator feels that he is seeing not just a symbol for the object, but the thing itself revealed for the first time.

Guided by the photographer's selective understanding, the penetrating power of the camera-eye can be used to produce a heightened sense of reality—a kind of super realism that reveals the vital essences of things. But it is not enough for the photographer to see and recognize this super realism. It is whether or not he is successful in transferring that vision to his finished print that determines the presence or absence of photographic beauty in his work. In this connection we must examine the third unique property of the medium—the ability to present an unbroken sequence of infinitely subtle gradations.

Gradation may be considered as the trademark of the medium; it cannot be entirely lacking in any real photograph and it is the quality that instantly distinguishes a photograph from a drawing or painting. But it does not follow that the more gradation present the better the picture. I have seen photographs full of subtle gradation that were not at all interesting as pictures, and others in which gradation was restricted to a comparatively small part of the total picture area that were achievements of real photographic beauty. Gradation, like technique, is the means to an end—in this case the means of retaining and intensifying the quality of super realism we wish to present.

In choosing his printing paper the photographer must consider what characteristics will further his intention and what will hinder it:

First: he will avoid papers of independently beautiful surface quality since such an element would conflict with the photographic beauty he is striving to present—for his purpose the paper surface and the image must become one inseparable unit;

Second: he will choose a paper with the longest possible scale, that is, one that can reproduce most from his negative, and thus retain more fully his original intention;

Third: he will choose a paper that reflects light, in preference to one that absorbs it, for this characteristic, by duplicating on a small scale the visibility-mechanism of the original scene, enhances the sensation of reality.

All of these requirements can be fulfilled only by a glossy or waxed print. The smooth surface can retain the integrity of the photographic image; a rough surface dispels it; the reflecting surface can preserve the intensity of the photographic vision; an absorbing surface dilutes or destroys that intensity. Of course the photographer does not automatically achieve all this by using glossy paper or waxing his print. Nothing is easier than to make bad prints on glossy paper because its added clarity at once exposes any technical error or weakness in seeing. A thorough understanding of color values, tone and gradation, is essential if the photographer is to use the glossy surface effectively. With this understanding, there is no limit to the range of subject matter and variety of presentation possible.

The warmth and luminosity of flesh, the delicate substance of a high



"Floor, Death Valley, 1938"

Edward Weston

cirrus cloud, the rich texture of snow-polished wood, the metallic shimmer of sunlight on breaking waves—each of these can be intensified in its quality of warmth, delicacy, etc., on glossy paper. It can be made to render equally well the clear warm tones of sunlit dunes and the mysterious quality of light and shadow characteristic of a stormy day. And only on glossy paper could you, for example, retain the purity of camera vision that can, on an overcast day, look down a vertical mile at the great sheet of rain water evaporating off the saltbeds on the floor of Death Valley, and relate its form to the channelled base of the Panamint Range across the valley and a strip of highway circling an alluvial fan on the near side, and relate all of these to the minute patterns of mud cracks on the valley floor (the latter may not be visible in reproduction).

Photographic beauty as a term is only applicable to a finished print. But the photographer who would achieve it must remember that it is his seeing that creates his picture; exposure records it, developing and printing execute it—but its origin, in his way of seeing, determines its final value. His seeing must discover, before his technique can record.

If his seeing enables him to reveal his subject in such terms that the observer will experience a heightened awareness of it and so inevitably share in some measure the photographer's original experience—and if his technique is adequate to present this seeing, then he will be able to achieve photographic beauty.

Timberline

Captain Donald C. Kemp and Charles E. Laitsch

HIGH in the Colorado Rockies there is a vast region of forest-covered slopes and snow-blanketed peaks. It is a terrain broken by jutting crags and precipices, deep valleys and long steep slopes that are relieved here and there by flat-topped ridges. Here the sunlight sparkles in its intensity, and the wind is ever a-blowing. Along the upper edges of the forested area there is a belt in which the evergreens begin to diminish in size and become gnarled and twisted and grotesque in form. And as you climb higher they shrink to matted shapeless masses hugging the rocky earth, and finally disappear altogether. This is—Timberline! A region rugged and wild, all but forgotten since the days of the explorer and the prospector, except by the few who love its magnificent severity. This back-country contains a wealth beyond imagination: a wealth in limitless possibilities for truly great photographs.

But you who seek this wealth must realize that, like other treasure, it is not to be had for nothing. You must be prepared to forget your automobile, and to depend upon your own two feet during your quest for pictures in this rough country. You may often have a long hard ride on horseback before you reach your goal. The going is tough, and sunburn, windburn, and snowburn will contribute to your discomfort. But cheer up! The results are worth it.

When you finally come to a section in which much of the timber has been cut, and the remainder long ago burned, you have found a likely area to begin your search. But even after you have arrived in this Timberline country you may be at a loss to discover a satisfactory shot. There are excellent potential subjects all around you. But—in this one there are distracting rock masses. Fallen trees spoil the foreground in that one. And if only that short growth had sprouted in another place! Some of these factors you can remove. Others are rooted there. But, on with the hunt for treasure. This is no time for discouragement, for you must remember that it is usually the exception, not the rule, that your knotty stump or gnarled and twisted tree is sufficiently isolated for a perfect composition. They are there, but often you have miles of walking before you find them.



"Stout Fella!"

Capt. D. C. Kemp

This magnificent specimen stands just below the top of a long bare ridge of an elevation of about ten thousand five hundred feet, near Apex, in Gilpin County, Colorado. Here is a stump that has defied first the man-wrought havoc of lumbering, and then the more sweeping destruction of forest fires. Its twisted and grotesque form well illustrates the effect of the climatic rigors of high altitudes. This exposure was made early in September, about ten-thirty in the morning, at one second with stop f:32 and an A filter.

From an elevation of approximately ten thousand five hundred feet on up to eleven thousand five hundred, where tree growth practically ceases, the live trees become more and more dwarfed. As a rule, suitable subjects are seldom over ten or twelve feet in height, and frequently they are four feet or less. In the accompanying illustrations the subjects are apparently of greater height than this, but the illusion is the result of placing the camera near the ground, and shooting upward.

There are several reasons for a low camera angle, chief among which are the elimination of disturbing and unnecessary background, and the added definition to be obtained by outlining the subject against the sky, which, through the use of filters, may be somewhat over-corrected. Even though an overly dark or black sky may seem a bit trite, the use of an A or a G filter in this type of work is logical, as a rule, because the metallic luster of the trunks and branches registers in the grey tone-scale at approximately the same point as an uncorrected sky. The use of a low camera set-up with no filter, or with one of less intensity than the A and G varieties, would place the grey of the wood against an almost equal grey of the sky, with consequent loss of detail and definition through lack of contrast. In short, an uncorrected sky tends to rob the most artistic tree or stump of its drama and appeal. Should you raise the camera to normal height, you would probably bury the subject in a meaningless and cluttered background of rocks and timber. Some Timberline subjects, however, maintain their appeal by broad masses of light and shadow. This case might be cited as an exception to the use of filters. With such subjects, a bald, uncorrected sky may enhance the effect.

This mention of a bald sky brings up the topic of whether the presence of clouds is more desirable in the composition of the picture than their absence. Some Timberline trees suggest, in their form and setting, a motif which only a magnificent cloud-bank in the background could dramatize. Others of more simple or severe form are, perhaps, best expressed against a bald sky. It is up to you, the artist, to decide which type will give you the most effective picture. Incidentally, this becomes an excellent test of your artistry.

The equipment for your Timberline expedition need not be extensive. Weight in camera should be sacrificed for weight in a good solid tripod. A firm support is absolutely necessary, because effective results depend on the use of a small aperture. Seldom it is that your camera is set up more than a few yards from the subject: and, as it is difficult to find a view in which most of the tree is in one plane, the depth of field must be as great as possible. At such stops as f:32, exposures in the mountains almost always average a fifth of a second with a light yellow filter. Hence, in the face of the strong and ever-present wind, the importance of a firm and heavy tripod is readily appreciated. Further, the tripod should be arranged so as to allow your camera to be set within a foot of the ground when necessary. Your camera will be, from experience, of a medium size. The 9 by 12 centimeters—3¼ by 4¼-inch type with a ground glass focussing screen has been found to be about ideal. It is large enough to render good texture detail, and the focal length of the lens is short enough to give satisfactory depth of field. Also, it is light enough so that, even with its necessary accessories, it does not become bulky and burdensome. Heavy



"Invictus"

Capt. D. C. Kemp

This curious pair of burned and twisted pine stumps were found just at Timberline, at an elevation of approximately twelve thousand feet, near the Trail Ridge road, west of Estes Park, Colorado. The picture was taken in early September, at about two o'clock in the afternoon. The exposure was 1/25 of a second at f:16, with a G filter.



"Spirit of the Storm"

Capt. D. C. Kemp

cameras of the reflex and view types are not recommended, largely for this reason. The illustrations accompanying this article were taken with an Ihagee 9 by 12 centimeter machine fitted with a Graflex back to permit the use of the Graflex $3\frac{1}{4}$ by $4\frac{1}{4}$ cut film magazine. The lens used was a 135 millimeter ($5\frac{3}{8}$ -inch) Carl Zeiss Tessar. The filter equipment desirable for the expedition has already been mentioned. From the above general description of Timberline country, the reader has probably realized the necessity for stout hiking clothes, warm and serviceable, and, in planning a trip into unfamiliar country, the services of a guide, or a map and compass.

The negative material used for the illustrations in this article was of the panatomic type with a Weston daylight rating of 16. This is a comparatively slow film, but efficient in this work, due to the beautiful tone-gradations it affords. And, with proper development, the film yields the fine grain so essential to the rendition of texture detail. No set method of film development is recommended, other than a very full processing in a fine grain, low contrast developer such as Eastman's formula D-76. The use of a developer of this type also does much to bring out the long scale of gradation inherent with the film.

The choice of a paper on which to print your Timberline trees must rest with you. Some will choose a rough surface to harmonize with the subject, others will prefer a smooth or glossy surface to bring out the maximum in detail. And the slower emulsions—the chloro-bromides—are more flexible



"The Pennon"

Capt. D. C. Kemp

and seem to afford a gradation better fitted to the rendering of a print which will do justice to a good negative. Whether you will select a buff or white paper will depend on the feeling you wish to convey in the finished picture. In general, the print on buff or ivory stock expresses warmth and sunshine, and is easy to live with, day after day. But the cold tones of the black and white paper have their place, too, and are necessary if you decide to tone the print in gold chloride, or in one of the many sepia toners, for special effects. Toning, however, should be used sparingly and cautiously, lest you face the accusation of attempting to gild the lily. As to paper developers, they are more of a routine detail to be decided by your own darkroom technique, since it is you who are attempting to express the thought or mood conveyed by the scene at the time you photographed it. The prints accompanying this article were developed in Eastman's D-72. But the experienced worker will probably have his favorite among developer formulae.

A solemn admonition might be given in closing: You who travel this country in quest of pictures, remember, you are in Timberline land, where the great expanse of peaks and gorges, mingling with the grotesquely stunted tree growth, emphasizes, through the majestic splendor of the one, the starkness of the other in the constant struggle for life itself. Theirs is a struggle against snow and icy gales; against lightning and torrential rains. A struggle under which they are bowed, twisted, deformed, and uprooted. A struggle for you to picture with your camera, if you will.

Better Bird Pictures

W. W. Coleman and F. J. Wilson

NATURE photography with emphasis on birds has many adherents and, given encouragement and a trial, will have many more. The exhibition of your efforts need not be restricted to a few friends or fellow club members. Both the Royal Photographic Society in London and the Oval Table in New York, have a section of their annual salons devoted to natural history subjects, where the nature photographer can compete and become acquainted with his fellow workers. Here the finest quality of material is demanded for exhibition; however, there are many other "shows" that may be used as a sort of "proving ground." In England, the Leicester, Nuneaton and Birmingham Photographic Societies each offer a similar classification in their annual exhibitions.

Foreign salons of international character which welcome scientific entries include the Irish Salon at Dublin; the Cape of Good Hope, at Capetown, South Africa and the Scottish National held at Galashiels. In addition several of these competitions offer further awards such as plaques, medals and certificates to work of outstanding merit. Surely such exhibition opportunities should encourage the nature photographer to enter his best work.

The making of bird pictures which possess a definite pictorial appeal as well as a scientific value is a task difficult enough to be interesting without being discouraging. It is our purpose to sketch briefly how these efforts may be directed. To many people birds are shy, inaccessible, but beautiful denizens of our woodlands but to the bird photographer each one is a challenge to his skill, his patience and his ingenuity. How often have we heard a group of camera enthusiasts returning from a woodland stroll comment on these gorgeous bits of feathered life observed while tramping! Has not everyone at one time or another pursued a seemingly wounded bird only to have it suddenly recover and readily fly away? Few know or suspect that this feigned injury is merely a ruse to lead the intruder



"Cedarbird"

W. W. Coleman and F. J. Wilson

This Cedarbird portrait was comparatively easy to get. It has been hung in the Canadian National Salon 1937, and the Sixth Irish Salon.

away from the bird's home or young. During the nesting season many of our birds will permit liberties which one would not suspect.

Any camera capable of critical focusing may be employed; if it possesses a ground glass so much the better. With such a camera our rambles afield may become a purposeful search rather than aimless wandering. This sport called bird nesting in England is rapidly gaining over here. More leisure hours and an emphasis on outdoor activities coupled with a newly aroused and greater interest in nature may be held responsible.

Your first victory is likely to be an accident, for nests to the uninitiated may be an elusive object. The suggestion to "read-up" on the various common birds of one's locality usually leaves the reader with the conviction that some birds may nest most anywhere, and this is true. However, when your interest has been aroused, material on which to work seems to have a habit of turning up. Friends and acquaintances having learned of your ambition take pleasure in helping you seek suitable material. At first you will be content with pictures of the nests and eggs or young, but after you have found several and learned their names, a desire to know more intimately the occupants of these nests is likely. Turn to one of our countless bird books to be found in any public library and you will soon be well acquainted. For when you can readily identify the many birds in your locality, you take pleasure in the knowledge and at the same time the wish to photograph the adult bird becomes a definite desire.

This calls for more effort and patience than that required for the first attempts but then it will produce more praise and gratification with success. Repeated visits to a nest containing young will often condition the parent bird to your harmless presence but this method consumes a great deal of one's time and is less likely to produce results than the "hide" method. For it is in the employment of a hide or blind that one is really presented with the opportunity of making candid bird pictures.

The erection of a blind may be as elaborate or as simple as the operator desires. A rude boxlike framework of saplings covered with a large inconspicuous colored cloth is quite satisfactory. Such a tent-like structure will soon be accepted by the birds because of its immobility and a day or two after its appearance in the nesting territory it will be completely ignored. There is one precaution, however, which must be observed. Do not permit any portion of the hide to be capable of movement in event of a slight breeze springing up. Nothing so alarms the birds as bits of cloth flapping in the wind. The judicious use of a little more time spent in securing the walls of the hide will more than repay you for the time so spent.

A more convenient type of blind suggested by many ornithologists consists of sewing a long "skirt" to the outer edge of an umbrella; this makes a very portable and easily erected hide. The large beach umbrellas, though a bit cumbersome can be made into a truly luxurious blind in which hours may be very comfortably spent without any of the cramping that is occasioned by the use of too little material in construction.

Having chosen the nest on which you wish to work, the procedure is quite simple. The blind is erected some four or five feet from the nest, depending on the size of the image given by your lens. Our own preference is for the image of the bird to measure from three-quarters to one inch long.



"The Brush Owl"

W. W. Coleman and F. J. Wilson

Exhibited, Capetown Photographic Salon

With correct detail this makes a readily recognized contact print and appears very satisfactory for projection prints intended for exhibition. Further, this size on a $3\frac{1}{4} \times 4\frac{1}{4}$ " plate will permit more advantageous composition when the final print is to be made, as too much bird and not enough picture is even more difficult to handle than the other extreme. If possible the blind should be first set up at a greater distance from the nest than the actual working distance decided upon, then the distance between the hide and the nest decreased daily, ten to twelve feet is a good approximate distance for the first setting. The distance decreased two or three feet on each visit until the proper position is reached. Although this method requires several trips to the nest the results are more certain as it gives the birds a greater length of time to adapt themselves to the presence of this new structure.

When the hide is being placed in its final location, several factors should be considered. Most important is the lighting. Remember that the sun may occupy a different place in the sky at the time you plan to photograph as compared to the time you are erecting the blind as well as the fact that the blind will cast a shadow. The question of background now becomes important, try to avoid that which will produce a spotty or other-

wise disturbing appearance in the final print and be certain that foreground, nest and bird are included in the range of sharpest focus.

The last operation of preparation is the tying back of those few branches which obstruct your camera's view of the nest. Do not cut or break away these twigs for they serve a twofold purpose, they conceal the nest from the birds' enemies and at the same time provide some shelter from the elements for the young birds, and having been tied back they can readily be released to assume their proper place and purpose when you have finished. By observing this precaution you are much more likely to be able to continue your studies until the young birds have flown, life histories in this form have a definite appeal.

With the blind in place, cut a small hole to permit the lens to protrude, and several small peep holes for your own convenience. A lens shade is heartily recommended. Also the placing of the camera on a tripod will make waiting much more comfortable, as will a small folding stool in the hide.

Having checked the focus and composition and decided upon the proper exposure, then the time to relax all but your vigilance has arrived. Your silence, coupled with the young birds' cries for food, will soon fetch the adults back to their home.

It is often advantageous to be accompanied on these expeditions by a companion who can be of considerable help when it comes to arranging branches or other surroundings while you watch the effect in the ground glass. His greatest value, however, is when all has been arranged to your satisfaction and you are comfortably concealed in the hide, he can make his departure noisily so as to attract the attention of the birds. Strangely enough birds do not appear to be capable of counting and, following the disturber's leave-taking, they soon return to their family duties, thus providing the concealed photographer with many opportunities. We prefer not to trip the shutter on the first return to the nest for it will most likely be marked by some nervousness but as soon as one or two trips have been made in safety this characteristic disappears and after the first or second exposure they pay no attention to the noise which it occasions. If one of the parent birds does not return within an hour something is likely to be amiss and it is a good plan to leave the blind in place for another day and then try again.

The preparation of the final print for exhibition requires the same care and consideration as those intended for any salon section. Although you have a special division and fewer competitors, please do not think these factors will make for an easy hanging, they do not.

The basic elements which go to form a fine photograph apply to these prints just as emphatically as to any others. By that we mean the print, even though it is definitely a natural history subject, should have a pleasing composition and if it possesses a pictorial appeal so much the better. Technically, the prints should be as fine as the worker and his equipment are capable of producing. In recent years the presentation of prints has been more or less standardized so that light-colored mounts 14 x 18 or 16 x 20 are nearly universally acceptable.

The combination of nature and photography is a very happy one.



For nests located in high bush, the erection of a strong "tripod" framework will provide a platform on which to build the hide itself.



The construction of hides, which are both secure and comfortable in the tops of tall trees demands some agility and practical rigging knowledge.



The converted beach umbrella makes a spacious and easily erected blind and can be employed either at ground level or on the top of a platform.

Though there are now more salons offering a separate scientific section than formerly it would be appreciated by many nature photographers if still more would extend such an invitation. However, the list of salons appended below will provide the most ambitious exhibitors with ample opportunities to test the effectiveness of his efforts. The illustrations accompanying this article show a few of the various opportunities that are presented to the bird photographer. Come, join in this sport, your competition will be welcome, and may the glory of a "sticker" be yours.

The following photographic organizations hold an annual salon, a section of which is devoted entirely or in part to natural history subjects and their appearance in salon calendars should be noted by those interested in exhibitions:

The Royal Photographic Society, London, England.

The Oval Table Society, New York City.

Cape of Good Hope International Salon of Photography, Capetown, South Africa.

Irish Salon of Photography, Dublin, Ireland.

Birmingham Photographic Society, Birmingham, England.

Nuneaton Photographic Society, Nuneaton, England.

Leicester and Leicestershire Photographic Society, Leicester, England.

Bolton International Exhibition, Bolton, England.

Scottish National Salon, Galashiels, Scotland.

Australian Salon of Photography, Sidney, Australia.

The Baltimore International Salon of Photography, Baltimore, Md.

Annual Canadian Salon of Photography (Canadian residents only), Hamilton, Ont., Canada.

NOTE: This list is by no means complete and the authors would be very glad to have salon secretaries advise them by writing, care of Camera Craft, of any additional salons which have inadvertently been omitted.

Problems In Lecture Illustration

R. E. Reordan

AMONG the many attractions of the San Francisco Golden Gate International Exposition is the California Central Valley Water Project Exhibit. This project is an ambitious scheme of redistribution of the water resources of the State, a veritable gargantuan plumbing system that will store up the mountain waters in a score of dams and distribute them when and where they are most needed. The illustration of the lecture describing the project was undertaken by Mr. Walter Hall, assisted in the photographic end by the writer, and presented a number of interesting problems.

The job called for natural color lantern slides depicting the Central Valley of California, photographed for a large painting. They were to be projected on a fifty-four foot screen at the end of an auditorium built especially for the purpose. The valley was to be shown first as it appeared in the year 1760, before any extensive settlement. Then in subsequent slides, dissolving one upon the other on the screen, towns, roads, cultivated areas and other evidences of increasing population were to appear and grow in size and number. Such increase of population overtaxed available water resources and upon reaching the present day this progressive exhaustion was to be indicated by a diminishing of agriculture in certain areas, notably in the section northeast of Bakersfield. The next lantern slide sequence was to show a semi-dark scene, representing night, and superimposed on this image a sixteen millimeter motion picture projector was to indicate how the water project remedied these ills. Shasta and Friant Dams were to appear in their proper positions and water was to flow from them down rivers, conduits and canals to where it was most needed. This sequence and accompanying verbal explanation completed, a final full-color scene would show the benefits wrought by the project, the valley appearing reborn and verdant.



Figure 1

It became immediately apparent that it was too much to ask of a single lantern slide three inches in length to cover a fifty-four foot screen and it was decided to project the picture in three sections, side by side and blending into each other with no line of demarcation to destroy the effect of a uniform landscape. This decision was the source of most of our worry in photographing the job. It meant that the painting, in each of its eight different chronological sequences, must be photographed in three sections, each identical in size, shape, brightness and color value. It is obvious that each of the three sections of any one sequence had to be perfectly rectilinear on the film so that when projected the sections would show no gap or overlapping at any point along the line of their abutment. Moreover, each of the eight sequences had to be exactly equal in size as they were to dissolve one upon the other in such a manner that only the works of man showed alteration, permanent features of the landscape remaining unchanged in size and position.

Our first job was to build a large wooden track on which the sixteen-foot painting could slide to center each section before the camera, as shown in Fig. 1, it being thought more practical to move painting than camera. It was not considered best to use three cameras, for reasons mentioned later. The track was leveled most carefully with a transit to insure rectilineity. This completed, we constructed a camera stand of unrivalled solidity, with a five-ply top and four-by-four legs screwed to the floor (Fig. 2). The table was centered and squared opposite the painting by

describing arcs with a steel tape from the ends of the track and snapping a line from the center of the latter through the point of intersection of the arcs, a method of gaining a line perpendicular to another that harks us back to our high school plane geometry. The camera slid forward and backward for adjustment of image size in a track of its own made perfectly parallel to the line perpendicular to the painting, and was secured to the table with a tripod screw protruding through a slot in the table top.

Considerable work had to be done to the camera to make it worthy of its support, with all respect to the manufacturer. Unfortunately for our purpose, view cameras are made with a number of movements and adjustments not only valueless for this job but positively dangerous. The best of them have a certain play in their moving parts, even when locked, and any such movement of any part of the instrument would alter the image shape and size. This one, a four by five Crown, had a racking and sliding front which we butchered by driving two screws straight down through the front to the bed and further stiffened with two angles of brass. Having made the front solid, the back was rigidly attached to it with two brass arms sliding in blocks equipped with set screws. Once the camera was positioned, focus and all adjustments locked, nothing short of a pile driver could budge it.

The problem of consistent physical dimensions being attended to, we had to consider that of consistent brightness and color value. The illumination of the section being photographed had to be perfectly even over that area, with especial attention to evenness in a horizontal plane. If it were more intense at the edges, for example, the whole picture projected in three sections would not only be too bright on the extreme ends but would show two vertical bright areas where the sections came together. Even worse, if the illumination of the area being photographed was greater at one side than at the other, there would be two abrupt jumps from bright to dark at the abutment lines of the projected sections.

We used two 1,000-watt floods of very even light distribution, placed about fifteen feet to each side of the camera and about twenty feet back from the painting. Evenness of illumination was determined by substituting for the painting on the track a frame covered with plain white canvas the size of one section. Readings were taken all over this surface with a photo-electric meter and the lamps altered in position until no portion registered more or less brightness than any other.

It is possible, however, to gain a perfectly evenly lit area by this method and yet be troubled with glare from the surface as seen from the camera position. To use an extreme example, a mirror could be uniformly illuminated but still be an impossible subject if the camera were directly in the line of the reflection of one or more of the light sources. Both plain canvas and painting had rather dead surfaces which did not readily reveal such specular, or direct, reflections, so to detect them strips of shiny cardboard were attached to the canvas. These highly reflective surfaces showed the angles of direct reflection and proved them to be well to each side of the camera position.

As important as the distribution of the light was its color. We used Type B Kodachrome, which is balanced for tungsten light of a color tem-

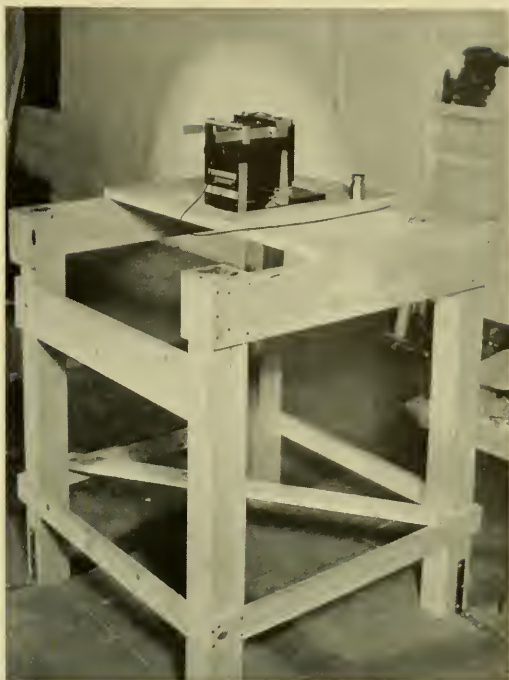


Figure 2

perature of 3,200 Kelvin. It is remarkable what small differences from standard conditions will affect the color balance of the film. The lamp best used in our reflectors was the 1,000-watt PS52, which at the time we commenced the job was not available with a 3,200 K. filament, the standard PS52 burning a little cooler. We tried first burning a 115-volt lamp at 120 volts, hoping to bring the color higher up the spectrum but the rise in temperature was not sufficient for faithful rendering. In despair we were about to turn to the 1,000-watt T20, which is supposed to burn at 3,200 K., when the special PS52 designed for Kodachrome became available on the market and the problem vanished.

This matter of burning lamps at different voltages is an important one in the handling of Kodachrome. A fluctuation in line voltage will sometimes cause a not inconsiderable change in color balances. It will be seen that if the voltage varied as we photographed different sections of the scene, the three sections would not match in color when projected side by side. Frankly, this was a problem we did not solve in practice, though we arrived at a theoretical solution which we lacked time to put into effect. It would seem that the ideal arrangement would be to use lamps intended for a lower voltage, or a higher one, than that supplied locally. For example, 115-volt lamps might be used on a 120-volt line. Then by connecting a variable transformer and a voltmeter into the circuit the potential difference could be reduced to the proper 115 volts. While shooting, a constant check could be kept on the voltmeter and any fluctuations in the line, whether up or down, could be compensated for with the variable transformer.

Another point to be remembered for perfect color reproduction is the color of the surroundings of the object being photographed. If there is much spill of light from the lamps, surrounding walls and objects should be of a neutral tone. Should a nearby wall be of a bright yellow, for example, spilled light reflecting from it may cause a mysterious yellow cast on the film. Great care should also be exercised in the use of diffusers over the lamps, being likely to have a slight selective color absorption.

I mentioned that it was not thought wise to use three cameras instead of moving the painting. Beside the obvious dictates of economy, we feared that there might be some difference in the color transmission of the three lenses and also in the color of the light emission of the various lighting units, which would necessarily have to be in triplicate. It would be too much to expect of three sets of lamps that they all be of identical characteristics. We made a practice of discarding lamps at the expiration of about half their rated life, to insure against changing of their temperature with age. Such replacement of lamps, of course, introduced a variable factor, but some alteration of color in succeeding chronological sequence was unimportant in comparison with color differences between the three sections of any one sequence. Moreover, burning of the new lamps for a couple of hours before actually shooting brought them down to about the same condition as the old ones.

Another threat to constancy of color we found was the use of film made from different batches of emulsion. Two emulsion numbers of Kodachrome will sometimes give widely varying results. No criticism is intended by this statement, for there is not a film or paper made that does not vary somewhat from batch to batch. Any color photographer knows that filter factors giving perfectly balanced negatives on one emulsion number of his favorite negatives may result in a greatly out-of-balance set when he uses another emulsion number, and that the only way to save himself grief from this cause is to buy his film or plates in case lots. And black and white photographers, whose work calls for many prints from the same negative, know that for consistent work they have to make another exposure test after opening a new box of paper of different emulsion number.

It is really of minor importance to record that we discovered that we obtained the most satisfactory exposure when rating the film at Weston 3.5, since individual meters and conditions vary. The correct Weston speed is said to be about five, but exposure calculated from this value on our meter gave us a picture beautiful in color but a little too dense for large scale projection. Tests made at a lower value than 3.5 gave a lighter slide but showed a definite loss in color. As far as color is concerned, Kodachrome always seems to look best with a minimum exposure.

The second phase of our job was the production of the 16 mm. film to show the filling of Shasta Dam and the passage of the streams released from Shasta and Friant Dams down their proper natural and artificial channels in accordance with the plan of the water project. This 16 mm. sequence had to be superimposed, as mentioned, on the screen directly upon a semi-dark still picture of the valley. The rivers, represented by a white line, had to exactly follow their proper courses, dimly seen beneath in the lantern slide projection. This required that we obtain an image on

Figure 3



Figure 4



Figure 5



16 mm. film of such dimensions that when projected at seventy-four feet by an inch and a half projection lens it would exactly coincide in size with the same object being projected from the same position by a twelve-inch lens from a lantern slide. Finding the exact camera working distance to produce an image of the proper size required no inconsiderable amount of calculation. It was found, however, by the use of two simple formulas with which every photographer should be acquainted:

$$(1) \ 1/f = 1/u + 1/v$$

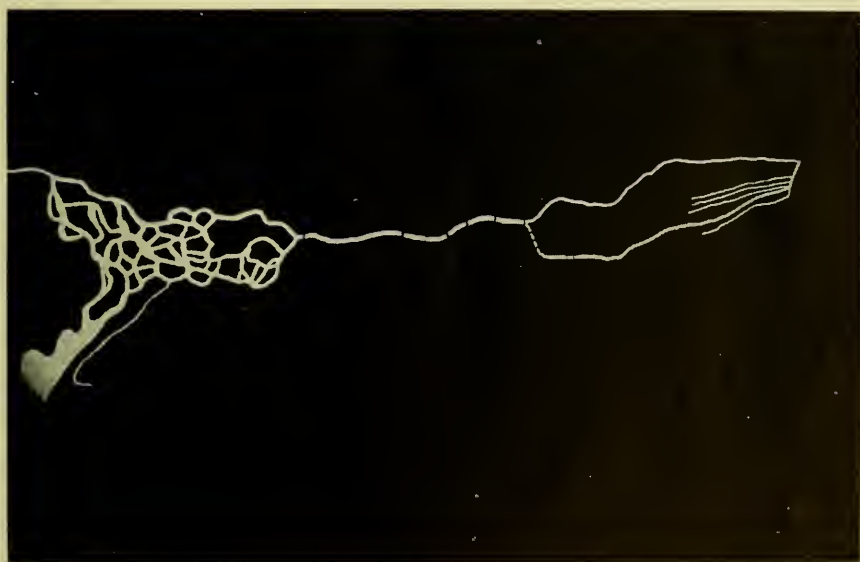
$$(2) \ \frac{\text{object size}}{\text{image size}} = \frac{u}{v}$$

where f represents focal length, u represents distance of object from lens, and v distance of image from lens.

The action of water rising in a dam and flowing downstream and up siphons was produced by animation, that is by gradually adding to the length or width of a white line, exposing a single frame after each small addition, so that when projected the line gave the effect of smoothly increasing in width or length.

In the question of the superimposition of the two projections, not only had the problem of size of image to be considered, but that of exact shape, since the waterways ran not in straight lines but in tortuous convolutions. Our animated white lines on their black canvas background had to follow precisely the courses they described in the original painting. The method of transferring these courses from one canvas to another was simple but perhaps sufficiently unfamiliar to warrant detailed description.

It was done by means of a pounce, which is nothing but a piece of tracing paper, supported in this case by a wooden frame. The pounce was put up against the desired portion of the painting (Fig. 3) and pricked with a pin along the various waterways, producing a pattern of holes. Fig. 4 is a closeup of the upper left corner of Fig. 3, showing the effect obtained. Had the pin pricks been likely to damage the painting we could have traced our picture with charcoal and then laid the pounce down on a blanket and pricked along the charcoal lines. Next the back of the pounce was sandpapered to give clean, definite holes. Then it was taken to the black canvas, carefully leveled and positioned, and the holes rubbed over briskly with a pounce bag, which is a little cheesecloth bag filled with chalk dust (Fig. 5). This was really a stenciling operation, and when the pounce was removed the pattern of the holes remained on the canvas outlined in dots of chalk dust (Fig. 6). After flicking with a handkerchief to remove excess chalk, the dots were covered over with charcoal, which left a line invisible to the camera but sufficiently obvious to the eye. In the animation all that was necessary was to follow the charcoal line with white paint to insure the rivers would flow exactly in their proper channels (Fig. 7). In Fig. 8, showing the camera in position for a close-up of the filling of Shasta Dam, the course of the Sacramento River outlined in charcoal can faintly be seen in the print but will probably be lost in the reproduction, which is doubtless as it should be. Perhaps the unfortunate projectionist to whom we unregretfully turned over the completed film had some thought about the whole thing when he undertook the positioning and wiring of the twenty-seven projectors required by the show.



Upper, Figure 6—Lower, Figure 7



Figure 8

Cinema Section

Edited by

William A. Palmer

Making Title Letters Move

IN making the "super-colossal" opening titles for the home movie masterpiece, the double exposure method which was described last month affords a great deal of flexibility. Not only can a great variety of moving backgrounds be put behind the lettering, but the lettering itself can be made to perform a great many interesting maneuvers.

Of the many different types of motion for title lettering, the most common is the crawler or rolling title. This has been used for many years as the cure for verbosity in titles. Well, it isn't exactly a cure but it makes the ailment less painful. It is found that it is impossible to put more than twenty-five words in a single title and still have the letters large enough to be read clearly. So when a title of perhaps fifty words or so must be shown, the practice is to set the lettering up into a paragraph with lines of convenient width (about six words per line is about the most that should be used) and a height sufficient to include all the lines without crowding. A fifty word paragraph set up in this way will be about twice the height of a paragraph of proportions to fit the motion picture frame area. Therefore when it is photographed, it is lined up so that the top part of the lettering fills the frame with reasonable edge margins and the paragraph runs out the bottom of the frame. Enough footage is run with the top part of the paragraph stationary so that it may be easily read through and then the letters are made to rise slowly until the bottom of the paragraph comes into view, whereupon the motion of the letters stop and enough additional footage is run so that the reading of the title can be completed by the most backward movie-goer. The use of a rolling title in this way, just to get over a long-winded title that can be boiled down to a respectable size, is not the sort of thing that one should encourage, but there is a perfectly legitimate use for the same motion.

When there is to be a series of titles, one following the other as in the case of typical main titles, the rolling title motion can be used to great advantage to make the transition between one title and the next. In this case a series of titles, each with its words grouped within the frame proportions, are lettered one underneath the other on a long card. The camera can then be set up to photograph the first title and when sufficient footage has been run on that, the card can be pulled up to the next title and so on. The effect on the screen of a series of stationary titles, one rolling up and away as another comes up from the bottom

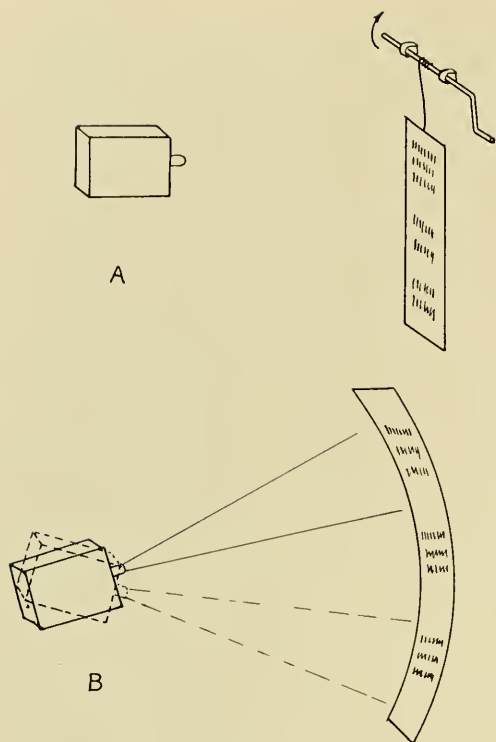


Figure 1

of the frame, is very attractive, especially if the letters are double exposed over a moving background.

Now for the means whereby the title card is moved. There are two methods by which rolling titles can be made quite easily. In one case the card is moved past the camera field and in the other case, the camera is moved while the card stays still. The two methods are illustrated in Figure 1. Here is suggested at "A" a method by which the long title card can be pulled up by means of a string wrapped around a small metal rod which acts as a windlass. The rod might be a quarter inch in diameter and bent to form a crank at one end. It can be supported on two wooden blocks at the top of the title board.

The other method illustrated at "B," Figure 1, is to support the long title card on a curve of such a radius that the camera, when in photographic position, will be at the center of the circle that would be formed by the radius. This curve need not be critically accurate. The rolling is then produced simply by tilting the camera on the tripod, to shift the field from the top to the bottom of the card.

The "Perspective Roller"

A novel variation of the rolling title and one which is very spectacular, is what might be called the "perspective roller" title. This is illustrated in Figure 2 and is made simply by laying the title card flat with relation to the camera and shooting the scene with a wide angle lens as the card is pulled away from the camera. On the screen this gives the effect of the title wording coming in at the bottom of the scene and filling the whole width of the screen, then receding off in the distance to disappear very small at the top of the frame. Because of the

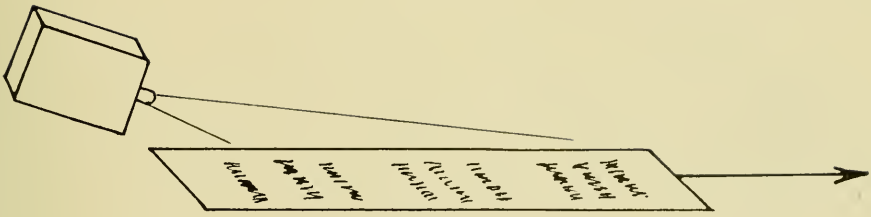


Figure 2

increased camera field as the card leaves the camera, it is necessary to have a card with a great deal of extra margin. The camera as shown in the sketch is mounted just a little above the card, pointed slightly down, on a board which is blocked up so that it straddles the card which will come from underneath the camera at the start of the operations. The card can be pulled along with a black linen thread over a black background. Of course, the same general set up can be used with the card coming toward the camera instead of receding from it.

As an improved method of pulling the cards, the hand-cranked windlass arrangement can be replaced with a small motor having a reduction gear attached to give a shaft with a slow speed of rotation. Such "flea power" motors can be purchased for three or four dollars and can be very useful if many special titles are to be made. An improvised motorized windlass can be rigged up by using the motor from a phonograph turntable, if it is the type that will run at the slow speed of 33-1/3 r.p.m. With such a motor, it is only necessary to remove the turntable itself and wind the string or thread around the spindle of the motor.

The "Barrel Roller"

Another variation of title letter movement is the "barrel roller" title as illustrated in Figure 3. Here a cylindrical drum or barrel is constructed and mounted so that it can be rotated by a crank attached to its axis. The title cards are then placed around the cylinder so that, as the titles are photographed, it is only necessary to turn the cylinder for a portion of a revolution to bring in the next card.

Still another variation is illustrated in Figure 4 in which four cards are placed around a square of wood which is pivoted at the top of an upright post. The cards form what looks like a cube with each side a new title. One of the sides is turned toward the camera as the photographing begins and is held stationary until time for the next title to appear. The cube is then quickly turned a quarter turn and stopped to give an interval for the next title to be read.

The fall-off arrangement of presenting a series of titles is shown in Figure 5. Here a stack of cards are held on the title board, supported in a couple of nails at the bottom. The title cards should be enough larger than the required field of photography so that they can be held by the top edge by an assistant. Then as the camera is running, the front card can be given a little push so that it will fall forward and off the nails, disclosing the next card behind it, and so on through the series. Or, if preferred, the cards can be hinged together along the top edge and then held so that the cards can drop down one by one into the camera field, each one falling down to cover up the previous one.

These various motions just described do not exhaust the possibilities by any means and the resourceful movie maker will no doubt figure out several tricky variations of his own, but any of them combined with a double exposed

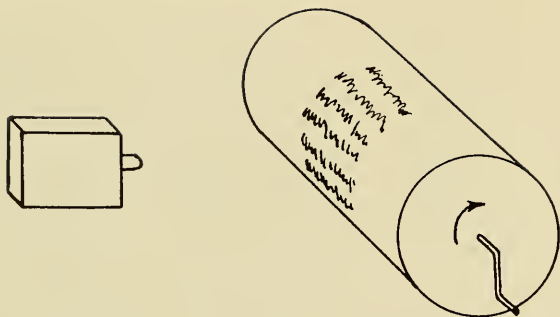


Figure 3

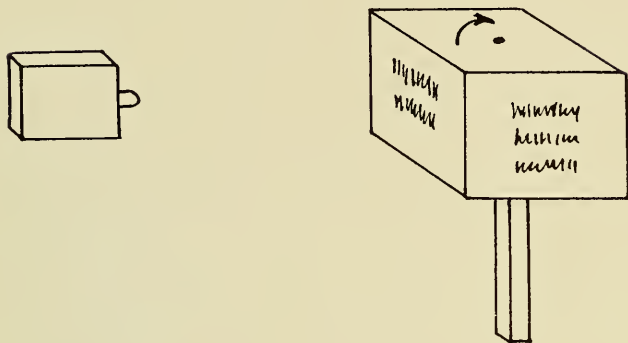


Figure 4

background of the type discussed last month should not tax the ability of any ordinary movie camera. The most important single requirement in this type of title-making is that no matter what the motions through which the title cards are put, all the supports and background of the letters must be dead black if they appear in the camera field. The only thing that should record on the field during the exposure are the letters themselves which are printed in white against a black card.

Reverse Motion Effects

There are a great number of fancy title effects that can be figured out to make use of the ability of a movie camera to reverse normal motion. If any regular camera is held upside down while pictures are taken and then the resulting scene is cut out, after the film has been processed, and reversed end for end, the motion on the screen will be backwards.

Reversing this principal, one can set up a title in movable individual letters, (paper, wood, metal, celluloid, or even alphabet soup letters) photograph the title with the camera upside down and then at the end of the scene destroy or muss up the words into a hopeless jumble. When the film is finished and the scene reversed end for end, the title words will appear to form themselves miraculously. The jumbling process can be accomplished by a hand appearing in the scene or may be made more mysterious by blowing the letters away if they are of paper or celluloid. Wood and metal letters can be easily jumbled by shaking the background upon which they are laid.

Of course, in all title work, the camera must be fastened to a tripod or rigid support and when it is to be operated upside down, there is sometimes a problem

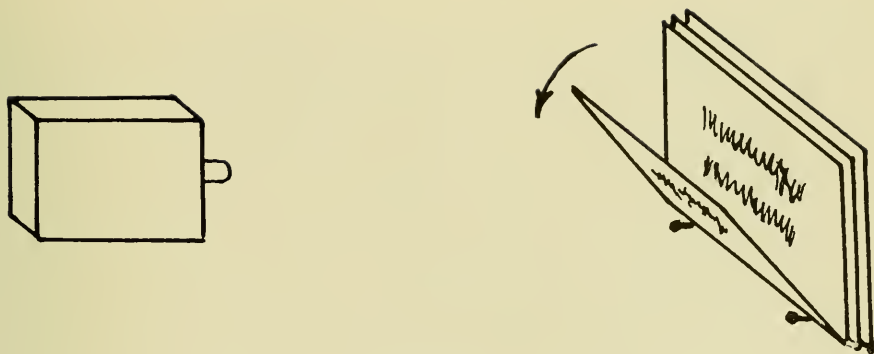


Figure 5

of holding the camera. With titles the problem is simple if the titles are set up upside down and the camera fastened to the tripod in the ordinary way. In most set-ups with movable letters, it is most convenient to place the background or title board on the floor in a horizontal or nearly horizontal position. The camera can then be tilted lens down.

Most tripods will not permit the camera lens to be pointed full vertically downward and if the title board cannot be placed at the angle necessitated by the camera's position, there is another dodge that can be easily worked. By the aid of a piece of strong picture wire and a small turnbuckle such as any fifteen-cent store can furnish, the tripod can be fastened to the wall of your basement or garage. Simply make three depressions for the three tripod leg tips and in the center fasten a screw eye so that the wire with the turnbuckle can be fastened between the screw eye and the underneath of the tripod head. By tightening the turnbuckle, the tripod can be made to stand out from the side wall as easily as a fly can affix himself there.

Along the lines of reverse motion effects to cause title lettering to mysteriously appear, are a number of possibilities which can be particularly useful with vacation films. Almost anywhere one might go for a vacation, there are objects typical of the region which can be arranged to form the letters of titles. On the seashore there are shells and seaweed, in the mountains are rocks and sticks which when laid on the ground to spell out words, can make very attractive titles. On the seashore the effect that has been used by many but is good enough for many repetitions is the stunt of drawing the title in the wet sand with a stick as the tide is coming in. With the camera held upside down one can watch his chance and photograph a wave as it comes over the title to obliterate the words. When reversed on the screen, the effect is that the wave comes in and then recedes, leaving the title behind.

Accurate Centering For Titles

The one biggest headache for any title making is the problem of accurately centering the titles in the camera field. The fact is that the viewfinders, having that well known boggy characteristic of parallax at close distances, do not show an accurate field. Therefore we must resort to some other means to find exactly where we are shooting, at distances closer than four feet. Some cameras are

equipped with parallax correcting finders, but even these are often not critical enough to assure dead accurate centering.

The one sure cure for alignment and centering and also a positive check on focus, is a test on exposed and developed film. Regular reversal film need not be used, for inexpensive "positive" film will serve beautifully. This can be exposed quickly and developed just before a title job is to be run. The procedure is particularly easy for those who have darkrooms for still developing in their homes, but anyone can do the job if he goes at it correctly.

Here is a good plan: Set up your title board and camera in a room that can be darkened. This means any room at night if it has curtains. Positive film is not very sensitive and although there may be quite a bit of dim stray light, a test can be made satisfactorily.

Procure two brown medicine or chemical bottles of about eight ounce capacity and fill one with developer—any kind will do, although a fast working one is best. Fill the other bottle with hypo and your testing kit is complete. If you don't care to mix chemicals yourself, have the bottles filled by your local photo finisher. He'll gladly dip out some of his "soup" for a few cents per bottle.

Having set up the camera as nearly correct as you can tell from the finder, guessing at a correction for parallax, turn out the light in the room and thread about a foot of positive film in the gate of the camera. (Positive film can be purchased at any photo supply house in 100-foot lengths. It is usually in "laboratory packing" and can only be opened in a dark room. For testing purposes it can be kept in the original can, sealed with adhesive tape. When film is needed for a test, open the can momentarily and clip off a short piece, keeping the body of the roll wrapped in its black paper protection. In that way, even if your room is not completely dark, the fogging will be slight.)

When the test strip has been threaded and the door of the camera closed, the lights are turned on and a test shot of the title is made. Flood the title card with plenty of light and leave the lens wide open. Then shutting off the lights again, remove the film and stuff it down the neck of the developer bottle. The operation can easily be done by feel in complete darkness, but if you wish, a ten-watt red globe will furnish ample illumination and will not fog the film. You don't need a fancy ruby lamp, just an ordinary ten-watt 110-volt red inside frosted lamp such as are used on outdoor Christmas trees.

After about three minutes, pull the film out of the neck of the developer bottle and put it into the hypo. It is not necessary to wash it. As soon as the film is in the hypo the lights in the room can be turned on again and within five minutes the film will have cleared so that you can remove it and inspect the alignment.

If the centering is not just right, move the camera to correct the difficulty as best you can by noticing the edges of the field in the test. This will be made easier if the test is made on an object with overall detail like a newspaper page. Referring to the test shot of such an object will show exactly where the camera lines are cutting. After making the correction, make another test on positive film to make sure that the centering is just right, and then you can go ahead with full confidence, that is, if you don't trip over the tripod leg or move the camera in some other way.

Tests of the sort described should not take over ten minutes to make and they require no special apparatus—just two bottles and a dark room.



"Fence"

F. Preston Willcox, San Francisco, Calif.

First Award Advanced Class

The comments for this month were written by Mr. Roi Partridge, who is an etcher of note, an art instructor at Mills College, and an active photographer. Some of his photographs have appeared on these pages.

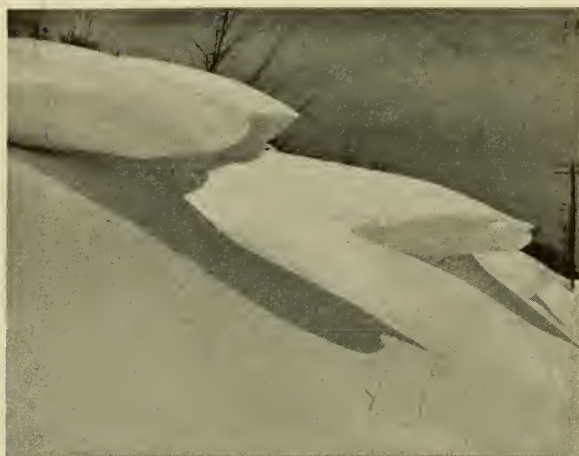
■ This photograph will probably appeal more to the trained eye than to the novice in photographic experience, who will wonder why what may seem a mere tangle of wire should be singled out for distinction. To the serious student, however, the subject exhibits qualities of design that lift it above the commonplace. To him it will appear as a fortuitous example of linear organization. Without these lines of wire, there would have been no reason for taking the photograph. Every part of this subject is essential to the success of the whole. The diagonal post to the right prevents the horizontal wire from leading the eye out—leads it back, in fact, into the picture. The wires, each individual strand of which is interestingly textured with barbs, contribute the rhythmic dynamic pattern which is the key of this composition; without their aid it is obvious the two posts would have been insufficient. The low horizon accentuates the basic wire-and-post subject and assists the mood of abandonment. Though slight, the wisp of cloud offers a slightly varied rhythmic repeat of the horizon line, and the gradation of tone in the sky is faultless. There is always movement—that is, life—in lines that depart from the perpendicular, while perfectly upright or horizontal lines are static and, in a measure, dead. With this in mind, the value of the slight lean in the post to the left as well as the diagonal of the supporting post to the right, becomes apparent.

So much in favor. Against this, it must be said that the badly out of focus quality of the clump of trees to the left is not easily excused. Many photographers defend such

(Continued on page 289)

Second Award

Advanced Class



"Snow Dunes"

Guy Jaconelli, Wheaton, Ill.

may be criticized in the original print. The composition would gain greatly if the telephone poles to the right were trimmed away and if the resulting spot of dark trees near them were held back a little in the printing. Upon close inspection of the original print the definition is disagreeably coarse and poor, thus causing the loss of the fine snow textures which otherwise could have been shown.

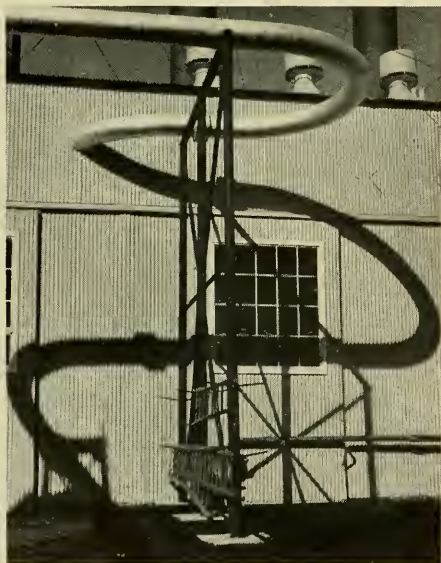
Data: 1/100 sec. at f/11 on E.K. Super XX in D.K.20. Print 10 x 13" on Brovira Royal in D-76.

■ Forms made by drifting snow, shadows cast by a pallid sun, a cold grey wintry sky, which is in good proportion to the masses of snow, and—with the exception of the telephone poles to the right, such details of twig and tree as are shown, all contribute to the success of this print as a composition. The linear relationships and the lines of snow forms and shadows have a fine sweep of movement, although this is not unpleasantly interrupted by the steps in the line seen against the sky. A bleak, grey, boreal mood is well established.

There is much, however, that

Third Award

Advanced Class



"The Shadow Serpent"

Lorraine Arnold,
Los Angeles, Calif.

■ Firm and pleasing definition, in harmony with the nature of its subject, characterizes this print throughout; while the depth of field in focus, so often found to be inadequate, is here seen to be ample. Note that both the near and the far part of the ladders in the lower center are defined with equal clarity. The texture of the largest areas will be pleasant to those who appreciate such factors irrespective of their naturalistic associations. As a matter of fact this subject, despite its title, comes close to being an abstraction, as will be noted by the fact it is almost as good seen sideways or upside down as it is in the normal position. To our notion the title "An arrangement in line and texture" would have been a better title than the one it bears, but the present writer hopes Miss Arnold won't use it, as he herewith lays claim to it himself. Good as it is, Miss Arnold's print, however, is not above criticism. The serpentine line of the pipe and its shadow is so active as to be disturbing, and

it will be seen to be improved if the upper part of the print is trimmed level with the top of the white ventilator on the roof to the right. It will also be found to gain if the section of window to the left and the black object in the upper left corner are cropped away. The structure of black pipes is unsatisfyingly near the center of the composition, and the shadow at the bottom becomes somewhat opaque in the right hand corner. It is suggested

(Continued on page 290)

Fourth Award

Advanced Class

■ In this print is seen one of those happy arrangements of living forms which are a source of astonishment to those of us who have a hard enough time achieving anything satisfactory even with inanimate objects that stay put. Mr. Hexter should not expect credit for perceiving that penguins are photogenic, but for the patience, the quickness of eye, for the ability quickly to seize a composition, for mastery of the camera, credit is due. (You would not put one over on us by finding your subject in a museum, would you, Mr. H.?) The composition, as before indicated, won the approval of the judges, and only picayune faults can be found with it, such as the over-close trimming of top and left side, which could have been corrected, and the presence of a small meaningless triangular spot touching the neck of the leading penguin, which could not.

With respect to photographic quality, approval cannot be unmixed. The photographer evidently belongs to what we hope and believe is a waning group which feels it is enough to get the front center two-thirds into clear definition. In photographing moving objects we grant there is something to be said for a wide open $f/1.5$ lens and super triple-umph emulsions, but if Mr. Hexter got this subject in a museum, and did not stop down, we will never forgive him.

Data: none.



"The Rome-Berlin Axis"

Myron Hexter,
Chicago, Ill.

Fifth Award

Advanced Class

■ In this portrait from war-torn China, the pathos of the subject must have been uppermost in the mind of the photographer. Yet he has not allowed this to obscure the need to meet the rules of the game as he knows them. The lighting has been thoughtfully considered to bring out the deep lines of character and age which cover the old woman's face like the crackle on ancient porcelain. The headgear surrounding the face has been skillfully subdued in order that no unwanted detail may obtrude itself into the arrangement. The care with which the background has been caused to become slightly lighter as it approaches the dark cloth which frames the face is apparent in the original print. And finally the placing of the face in the picture-plane is faultless. One has the feeling, however, of looking at an interesting subject through poor glasses or with poor eyesight. A diffused-focus lens has been used, and the result gives the present commentator the desire to brush away the cob-

(Continued on page 290)



"The Old Woman"

Francis Wu,
Hongkong, China



"Interpretation"

Glen Fishback, Sacramento, Calif.

First Award Amateur Class

■ Outstanding qualities of this print are first, its honesty, clarity and clean execution; second, its perception of pleasing geometric form in a familiar subject. We recall the penetrating words of Browning in which he states it is the duty of an artist to perceive beauty in things which we all "pass a thousand times nor stop to see." This is exactly what Mr. Fishback has done in recording the unadorned purity of form in the upper part of an unpretentious place of worship, a building so plain and honest that it becomes undistinguished. The sympathetic reflection of these qualities in the photograph—their duplication in photographic terms—serves to make the photograph as distinguished as the building. Note that the shadows are caught at exactly the right point, linking the large roof shadow with that of the lower entrance-roof, and just touching the dark

(Continued on page 290)

Second Award

Amateur Class

■ To the writer this print is something of the exception that proves the rule. Blown up to unnecessarily large proportions ($10\frac{1}{2} \times 13\frac{1}{2}$ ") and possibly even printed through some diffusing device, the original print is disturbingly lacking in definition throughout, though this will not be clearly realized in the reproduction. Furthermore the grain is so large one could almost count the individual dots. Yet it is a good print, worthy of the award which it here receives. However, if the drama of the subject, the contrast of light and dark, the variety of interesting forms presented by the dark, rubber-glove-covered hands, the splendid centralization of interest gained by the concentration of light and by the radiating position of the hands, is strong enough to carry such a blurred print to success, what *could* it have been if the photographic craftsmanship had been of a higher order!

Dr. Arnold is evidently an M.D., and probably a surgeon, with a high type of scientific training notable for the exactness of its methods. We hope he will forgive us if our interest in his print leads us to suggest that he apply his ability for exact technical procedure to the manipulation of camera, lens and enlarger.

Data: Leica camera; 90 mm f/4 lens. 1/40 sec. on panchromatic film with two photo-floods. Developed in D/76; $10\frac{1}{2} \times 13\frac{1}{2}$ inch print on Brovira in D/72.



"Life Savers"

Dr. Arthur C. Schiller,
Detroit, Mich.

Third Award

Amateur Class

■ In some ways it is as noteworthy and commendable to find a new slant on an old subject as it is to find a new subject. Even more than that, it would be quite possible to defend the hypothesis that the **subject** is of little importance; that the art of photography lies in the way it is done—in the design or composition, in the appropriateness of the technical procedure and accomplishment. If such is the case, or even partially the case, the print under consideration, though of a subject often photographed, may be commended.

The three-to-two division of space between the mass of boats and the expanse of water is in faultless proportion. The texture made by the boat-ribs is pleasing. Weeds and wharf help the composition. The line that begins with the bit of seat-support in the nearest boat and swings up through the seats to the rear of the farthest boat in the group may have been a mere accident, but it adds to the interest of the whole, and we contend that the instinct of a good photographer has something to do with recording such fortuitous accidents. Per-



"Idling"

John C. Moddejonge,
Parma, Ohio

(Continued on page 290)

Fourth Award

Amateur Class



"Honeymoon"

*Jack Wright,
San Jose, Calif.*

■ When a print contains as few points of interest as does this one, it is doubly essential that these points shall be right. At first sight this subject may be a little disappointing, but let us see what a careful examination discloses. The juxtaposition of the dark figures against the white steamer wake leaves no doubt at all regarding the center of interest. The swing of movement inherent in the railing, pleasing in itself, divides the composition into ideal proportions. To move it up or down so much as one inch (in the 10x13½ inch print) could not be other than detri-

mental. Note how the line of shadow in the lower left hand corner, touching the white bars of the railing with a pleasing dark relief, initiates a movement that is picked up by the edge of the wake and carried rhythmically out to the upper right edge. A source of pleasure to those predisposed to see it may be found in the contrast of textures afforded by the geometrically precise planks of the deck and the free swirling froth beyond.

Against these favorable comments, we must admit we think the print would be improved if the flag-pole were trimmed entirely out—nothing essential would thereby be lost—and if enough were cut from the left side to remove almost all of the small patch of white water. We resist the temptation to say that if this or that had been done with the subject matter, the results might have been better. Such comments seem rather pointless since the photograph is made and cannot be altered. But at least the photographer can trim his print, which justifies criticism about this aspect of print-composition.

Data: None.



*P. E. Guerrero,
Los Angeles, Calif.*

Fifth Award

Amateur Class

■ Here we have a regular straight-forward snap-shot, and one with subject-appeal which is tops. The human emotions, upon which a fondness for photographs of children and dogs is founded, need no defense nor explanations from us, nor does the predisposition to take snap-shots, which we find in a wide group of camera users, need excuse. But though we grant points for charm of subject, the result must be judged as a picture, an arrangement and organization. Photographs, worthy of consideration outside the family group, must meet still further tests than subject and casual shutter-snapping. Considered in this way, the present example meets requirements that win a measure of approval. It makes no pretense of being "arty"; makes no pretense of being other than it is—a sincere "candid camera" record of a charming child and a canine friend. The figures are well placed in the picture-rectangle save for being trimmed a bit too close at the top. It is brilliant in its tonal rela-

(Continued on page 290)

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Guy Jaconelli and Myron Hexter, for the Fort Dearborn Camera Club, and Lorraine Arnold for the Los Angeles Camera Club.

The following won prizes for their clubs in the Amateur Class: John C. Moddejonge, for the Cleveland Photographic Society; Dr. Arthur C. Schiller, for the Detroit Camera Club; Jack Wright, for the San Jose Camera Club, and Glen Fishback for the Signa Phi Nothing.

The following prize winners have no club affiliations: F. Preston Willcox, Francis Wu, and P. E. Guerrero.

Contributing Clubs

Amherst Camera Club (Mass.)	Fotoklub Zagreb (Jugoslavia)
Bell Telephone Camera Club of Manhattan	Indianapolis Camera Club (Ind.)
Calgary Photographic Society (Canada)	La Porte Camera Club (Ind.)
California Camera Club (San Francisco)	Long Island Camera Club (N.Y.)
Camera Clique of St. Louis (Mo.)	Los Angeles Camera Club
Camera Club of Richmond (Va.)	Midwood Camera Club (Brooklyn, N.Y.)
Camera Guild of Cleveland (Ohio)	Photographic Society of San Francisco
Charlotte Camera Club (N.C.)	Redland Photo Pictorialists (Calif.)
Cleveland Photographic Society (Ohio)	Rothschild Camera Clinic (Los Angeles)
Dallas Pictorialists (Texas)	San Jose Camera Club (Calif.)
Dayton Photographic Society (Ohio)	Sierra Camera Club (Sacramento, Calif.)
Detroit Camera Club (Mich.)	Skyline Camera Club (Waynesboro, Va.)
E.P.I.C. Pool of San Francisco	Washington Pictorialists (D.C.)
Fort Dearborn Camera Club	Wilshire Camera Club (Los Angeles)
Fotoklub Ljubljana (Jugoslavia)	

Standing of Clubs

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	35
Indianapolis Camera Club.....	11
Pictorial Photographers of America.....	6
Miniature Camera Club of Oakland.....	5
Fotoklub Ljubljana.....	4
Los Angeles Camera Club.....	3
Fotoklub Zagreb.....	3

Small Clubs Advanced Class

The Pack Rats.....	4
Yellow Springs Camera Club.....	3
The Camera Clique.....	2
Aluminum Camera Club.....	1

Large Clubs Amateur Class

Camera Club of Richmond.....	5
California Camera Club.....	4
Detroit Camera Club.....	4
Miniature Camera Club of Oakland.....	4
Cleveland Photographic Society.....	3
Indianapolis Camera Club.....	1
Sierra Camera Club.....	1

Small Clubs Amateur Class

Dallas Pictorialists.....	12
E.P.I.C. Pool of San Francisco.....	12
Signa Phi Nothing.....	5
San Jose Camera Club.....	3
Florida Camera Club.....	2
Midwood Camera Club.....	1

(Continued from page 283, First Award Advanced Class)

departures from a standard of clean definition, holding that this quality helps to concentrate attention on such parts as they favor us by getting in focus. The present commentator may be forgiven for offering it as his opinion that blurred details such as these are a confession of faulty technique; a difficulty that could easily have been avoided by the simple act of stopping down the aperture, thus increasing the depth of the focal field. The blurred grass at the lower right is also unfortunate. Aside from this but one other suggestion need be made—the division of space would be improved if a little of the print were cropped from the right and a similar amount added to the left. At present the posts divide the space in proportions that are too nearly alike.

Data: 4 x 5" Illustrators Special Camera; 1/25 sec. at f/16 with Zeiss f/6.3 lens with pola-screen, on Triple S Pan in D.K.76. 10½" print on Indiatone in Agfa 135.

(Continued from page 284, Third Award Advanced)

that the slight converging of the perpendicular lines, due to tilting the camera upward, could have been overcome in making the print by raising the upper part of the enlarging easel half an inch or so. Despite its shortcomings, however, this is a striking print.

(Continued from page 285, Fifth Award Advanced Class)

webs and to see more deeply into those obscure shadows; to see more clearly the texture of the cloth and the character of the headdress which shares importance with the character of the face. Even luminosity in the shadow of the face itself has been lost. It would be interesting to see what Mr. Wu would do with a corrected lens; we believe such a subject is good enough to stand the most penetrating vision. Merely stopping down the lens here used would have helped.

Data: Studio Camera. $\frac{1}{2}$ sec. on S.S. Pan at $f/4.5$ in D.K.76. 11×14 " print on Brovira.

(Continued from page 286, First Award Amateur Class)

window sufficiently to keep it from becoming too spotty. Even the small patch of sunlight in the lower left hand corner may be considered as adding balance to the composition, though the keynote of puritan simplicity would have received still further accentuation if this spot could have been eliminated. That Mr. Fishback used a lens as well as a skill that stirs one's admiration is evidenced by the definition, which is good from corner to corner, specific evidence of which is offered by the manner in which the minute twigs and branches of the distant tree are cleanly and sharply rendered. The slight lean of the building in the composition is pleasing, and the lines of the boards add an agreeable texture, giving solidity to an area which, being unfortunately close in value to the sky, would otherwise lose substance.

On the other hand, it is obvious that the sky lacks tonal richness, a fault which could have been greatly improved by the use of a filter or even by dodging to add graduated depth to the upper part. The print would have been improved if it could have been less tall in relation to its width. One also regrets the dark spots in the trees to the lower right, which cannot be trimmed, however, without adding to the height. We wish Mr. Fishback had offered data with his print as we would like to know, among other details, the size of the negative and the kind of lens used.

(Continued from page 287, Third Award Amateur Class)

haps this composition is to some degree unfortunate in that the major lines or movements in the boats tend to lead the eye out of the picture-plane to the right. It is impossible to be quite sure just where the eye should come to rest. In other words, it lacks a center of interest. As a minor point of criticism, one which will not be noticeable in the reproduction, we object to the border of black surrounding the print, which has been painted on with ink. Borders of either white or black are not essential: Simple trimming and mounting is less fussy, less "arty". When in addition this inconsequential result is obtained by the intrusion of an un-photographic method, it is to our mind doubly to be condemned.

Data: $f/4.5$ lens in Graflex; $125\frac{1}{2}$ sec. at $f/16$, no filter. S.S. Pan film in D/72. 7×10 inch print on Brovira in D/72.

(Continued from page 288, Fifth Award Amateur Class)

tionships. The camera and lens must have been good ones, meriting pride of ownership. In order to get that rich sky, a filter must have been used, indicating more than the tyro's knowledge of photography. The lens must have been used wide open, but where the subject is sharp, it is **sharp**—which, simple as it sounds, is not always the case with subjects submitted to these competitions. We would like to see what this photographer would do with subjects of another type and a more careful utilization of the capacities of his camera and lens.

Data: None.

Correspondence*

About Composition

Dear Sirs:

I would like to venture a few comments on Mr. Noble's attitude toward composition as expressed in his letter published in your May issue.

All will agree that if photographs are

made purely as personal records; as a means of jogging the photographer's memory of a past experience, composition is hardly worth bothering about. In such case the photographer's memory takes the place of composition, supplying the clarity, emphasis etc., that are lacking in poorly composed

*Readers are requested to add a postscript to letters intended for this department expressly granting permission to publish.—Ed.

pictures. (This points to one reason why a weak composition may not bother the photographer nearly as much as it does others.)

The instant a photograph is shown to a second party, however, the tolerance mentioned breaks down. Memory cannot help, everything which is communicated must come from the picture itself.

If we consider photographs as a means of communicating thoughts and emotions, an analogy with writing may make my point clear. A few disconnected words or phrases hastily jotted down will suffice to recall a past experience. If I wish to convey that experience to a friend the notes are not enough. I must write of my experience rather fully, taking care to observe a reasonable sequence, and to emphasize the important points. In short I must execute a **composition** in the English language. The poorly composed picture is equivalent to the written note which is completely intelligible only to the person who made it. The well composed picture is equivalent to the well composed piece of writing.

The point of all this is simply that composition is an essential factor in all means of thought transference. Without composition meaning becomes obscure, confused and devoid of force.

Sincerely,
Wm. L. Linee.

Competition Comment

Dear Sirs:

Having sampled most of the photographic publications from time to time, I have finally selected Camera Craft and American Photography as the two most appetizing and digestible for a steady diet.

In general, I think your selection of contributed manuscripts is inferior to American Photography. Your monthly competition is your outstanding feature—a department which is unapproached by any other publication. The print selections exhibit good taste and judgment. The accompanying criticisms are splendid. I fully agree with your contributor, Mr. Douglas, in his comment about them. As you excel in this faculty, I would like to see you extend the scope of this service even more by reproducing a

dozen or twenty prints each month from some of the other salons, with equally enlightening criticism. I think it would be the most important improvement you could make in your magazine.

Incidentally, I consider your adverse comment regarding "Sunny Moment" (April issue) fully justified. I also feel that you have neglected an important criticism of "Tall Corn" in the same issue. To me, this picture, with its excessively dark sky and plant, shouts "Filter." I have read that the tonal scale of a print does not have to be true to Nature, provided it gives a true impression to the eye. But this looks like a picture taken in bright sunlight which has been darkened too heavily.

Sincerely yours,
Richard P. Keigwin.

Horizontal Mounts

Dear Sirs:

I was quite interested in reading the recent letter of Mr. Walter P. Bruning to your magazine regarding salons and especially his comments about the insistence that horizontal prints be mounted on vertical mounts. It is manifestly unfair to the horizontal print as it does not show up to the best advantage.

As Mr. Bruning mentioned, a salon is held for the purpose of presenting to the interested public, the best in photography and if the prints are not properly mounted and hung, it would be better not to hang them at all. Salons should help to raise the standards of photography and everything should be done to present these pictures to their best advantage. If a salon committee does not want to go to the trouble to hang them properly or if the facilities are not there, it should not have the salon.

One way in which this sort of thing could be overcome would be for the Photographic Society of America to specifically recommend that such a restriction be eliminated from salon rules. If this was done the practice would soon be broken up. I think Mr. Bruning is doing the salon game quite a favor by bringing this matter into the open.

Sincerely yours,
J. S. Rowan.

What Is Your Photographic I. Q. ?

It's easy to test your photographic knowledge with the True-False test. Read the following statements and check each one as being either true or false. Then turn to page 296 to determine your score. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good, 80%; good, 70%; fair to bad, below 70%.

1. A general rule is that the faster the film the faster is its rate of development.
☐ True ☐ False
2. The crystals of sodium carbonate are commonly called sal soda.
☐ True ☐ False
3. Orthochromatic incorrectly designates a film made sensitive to green, but not to red, light.
☐ True ☐ False
4. The new P & H Process for developing films was discovered by H. C. Benedict, Ph.D.
☐ True ☐ False

5. A red object photographed through a green filter would appear black.
☐ True ☐ False
6. Any brand of bromide paper is suitable for the bromoil process.
☐ True ☐ False
7. The circle of confusion on a high class miniature lens does not exceed 1/800th of an inch.
☐ True ☐ False
8. "Sound-on-film" is only made possible through the use of 35 mm. size movie film.
☐ True ☐ False
9. In both the apothecaries' and the avoirdupois weight, the dram or drachm is one-sixteenth part of an ounce.
☐ True ☐ False
10. The running time of fifty feet of 8 mm. movie film is equivalent to the running time of one hundred feet of 16 mm. film.
☐ True ☐ False

Club Notes

Forthcoming Exhibitions

Second Annual Salon of Photography. **Lititz Springs Camera Club.** Address Carl B. Workman, Secretary, Lititz Springs Salon, Lititz, Pa. Closing date June 15, 1939. Entry fee \$1.00, limit four prints. July 5 to 15, 1939.

Whitby and D. P. S. First International Photographic Exhibition. Address Exhibition Secretary, 3 Guisborough Road, Whitby, Yorks, England. Closing date June 24, 1939. July 24 to August 19, 1939.

International Salon of Photographic Art. Address M. le Secretaire, Societe Francaise de Photographie, 51 Rue de Clichy, Paris, 9e, France. Closing date June 30, 1939. Entry fee, 40 French francs, limit 4 prints. October 7 to 22, 1939.

The Victorian International Salon of Photography. Address Mr. C. Stuart Tompkins, The Junction, Camberwell, E. 6, Melbourne, Australia. Closing date July 1, 1939. Entry fee 5s. Limit four prints. August 7 to 19, 1939.

International Photographie Salon at Munchen. Address Mr. H. Kainz, Munchen 9, Widensteinstrasse 14, Germany. Closing date July 1, 1939. Entry fee \$1.00, limit 4 prints. July 29 to August 20, 1939.

Huguenot Camera Club First Anniversary Salon. Address Huguenot Camera Club, Y.M.C.A., New Rochelle, N. Y. Closing date August 15, 1939. Entry fee \$1.00, limit four prints. Entries accepted from all photographers who are residents of Westchester County.

Seventh International Salon of Pictorial Photography. Address Potoklub Zagreb, Masarykova 11, Zagreb, Yugoslavia. Closing date August 20, 1939. Entry fee \$1.00, limit 4 prints. October, 1939.

Fifth International Focus-Salon. Address International Focus Salon, Bloemendaal, Holland. Closing date August 25, 1939. Entry fee 2, 5 florins, limit 4 prints. September 30 to October 15, 1939.

500 International Photographic Prize Competition. Address Messrs. Franke and Heidecke, Brunswick, Germany. Contestants living in the United States may send their entries to Burleigh Brooks, Inc., 127 W. 42nd St., New York, N. Y. Closing date August 31, 1939. All owners of a Rolleiflex or Rolleicord camera are eligible.

The Photographic Society of San Francisco's newly elected President, Mr. Louis J. Spuller, Jr., announces that the San Francisco Museum of Art has extended, to the Society, an invitation to hold its meetings at the Art Museum, at the War Memorial, Civic Center. This invitation was unanimously accepted by the members. The Society is proud of this association with the San Francisco Museum of Art and the facilities of the new quarters. Further information on the So-

ciety's affairs may be had by communicating with the Secretary, Mr. Edward S. Goetze, 111 Sutter St., San Francisco, Calif.

Two summer session courses have been announced by the School of Design, 247 East Ontario St., Chicago, Ill. Under the direction of L. Moholy-Nagy, the school bases its instruction on the methods of the famed Bauhaus. The summer courses will be held from July 10th until August 18th. One will be given in Chicago at the school building and the other at Rumney Farm, Somonauk, complete details may be obtained from the above address.

The Sixth International Salon of the Pictorial Photographers of America will be displayed in the American Museum of Natural History during the duration of the New York World's Fair. Because of the unusual length of time that this show will be exhibited and the large number of visitors who will attend, the Pictorial Photographers of America have prepared a special catalogue of the Salon that will reproduce all of the pictures in the Pictorial & Modern Sections of the Salon. Nearly four hundred reproductions will be included. Because of the generosity of members in contributing their time and effort, the catalogue will be available for only 25c (30c postpaid by mail.) Write the Pictorial Photographers of America, Emanuel M. Weil, 100 Gold St., New York City.

Walker's First Annual Photographer's Grand Tour of Europe will be conducted, from August 11 to September 25, 1939, through England, Holland, Belgium, Switzerland, Germany, Italy, and France, the Walker Travel Agency, Ridgewood, N. J., recently announced. The tour will proceed by private motor coach and will be under the photographic leadership of Mr. Edward Alenius, F.R.P.S. The trip is open to all photographers and offers them a rare opportunity to obtain a fine group of negatives and enjoy an exceptionally interesting trip. Details may be had from Mr. Edward Alenius, Holmes Brook Road, Basking Ridge, N. J., or the Walker Travel Agency.

Sunday, June 25th has been definitely set as the date for the **Photographic Conclave to be held at the Golden Gate International Exposition.** The program will consist of several talks by outstanding speakers during the day, followed by a dinner and an E.P.I.C. Print Competition. The Conclave is being jointly sponsored by the California Camera Club, the E.P.I.C. Pool of California, Light and Shadow Club of San Jose, Pacific Pictorialists of San Francisco, the Palo Alto Camera Club, Photographic Society of San Francisco and the San Jose Camera Club. Bakersfield, Fresno, and the Cameradiets of San Luis Obispo have already signified that members of their clubs will be present to represent them. Other clubs that have members who would like to make reservations should address Jack Garnett, 16 California St., San Francisco. Unaffiliated workers should make reservations through their nearest camera club.



Victor Keppler



Nickolas Muray

*These pictures and three or four hundred others may be seen in natural color at the
Second Annual Exhibit of Color Photography*

The Second Annual Exhibit of Color Photography will be held on the ground floor of the Associated Press Building, Rockefeller Center, New York City, June 3rd to June 16th, inclusive. This is an event of major importance to photography and every photographer, amateur or professional, should expend every effort to attend. Work will be exhibited by America's finest color photographers, among them: Anton Bruehl, Fidelis Harrar, Paul Hesse, Victor Keppler, Nickolas Muray, Paul Outerbridge, Jr., and Valentino Sarra. Above are two black and

white reproductions of two of the prints that will be on exhibition. With color taking an increasingly important place in photography, we cannot overemphasize the importance of this show which will present a review of the work and technical methods used by the finest color photographers. The exhibition is sponsored by the Devin Color-graph Co., 305 East 43rd St., New York City, makers of the famous Devin One-Exposure Tricolor Cameras and the Devin Tricolor Pigment Paper.

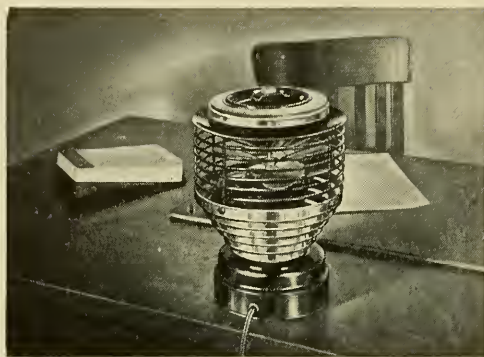
Notes and Comments

A new 36-page manual on Speed Flash Photography with the Kalart Micromatic Speed Flash is being distributed free by the Kalart Co., 915 Broadway, New York City. The booklet gives exposure charts, details on the use of the Speed Flash with 30 popular cameras, and much other valuable information. Kalart is also distributing free of charge a new house organ "Speed Flash Pictorial." It gives the latest developments in Speed Flash Photography and information on how better synchronized flash pictures can be made. Kalart has also just introduced the Synchroscope, a device for testing synchronization. The tests made with the Synchroscope require no flash bulbs and as the device shows whether the shutter is fast or slow, adjustments are easily made.

Two new photoflash lamps for focal-plane shutter synchronization have been announced by the General Electric Co., Nela Park, Cleveland, Ohio. The new lamps, of-

fering extra-long flash duration, will be designated as G.E. Mazda Focal-Plane Photoflash Nos. 30 & 31. No. 30 is specifically designed for cameras, equipped with focal-plane shutters, up to $2\frac{1}{4} \times 3\frac{1}{4}$ " size and No. 31 is for cameras up to 4×5 " size. The new lamps are the aluminum wire type and will be available June 1st.

The Jenkel-Davidson Optical Co., 366 Post St., San Francisco, Calif., have opened a fine camera department in their attractive modern quarters, opposite Union Square. The department is under the direction of Mr. W. L. Walling, formerly associated with Frederick & Nelson, of Seattle, Wash. Mr. Walling is being assisted by Mr. Theodore F. Meyer, formerly with the Eastman Kodak Co., in Honolulu. The new department will offer complete service in still and cine photography. The store has a fine projection room available to customers and a demonstration darkroom.



The new Kisco "Pep" Table Model Circulair offers an excellent method of keeping the air in your darkroom in good condition. It takes the cool air from the floor and distributes it in all directions without causing a draft that will disturb the lightest paper on your work table. The Circulair is equipped with a disappearing ash-tray, an aid that will keep down the dust in your darkroom. Descriptive circulars are available. Write The Kisco Co., Inc., 39th and Chouteau, St. Louis, Mo.

The Home-Photo Service, Box 652, Huntington Park, Calif., is offering an unusually complete finishing service for 35mm. users. The service offers fine grain processing of any 36 exposure roll; one 3x4 print of each negative; all negatives treated by the Vaporate process; and the magazine reloaded with 36 exposures of Super Sensitive Panchromatic film. Price is only \$1.75.

"Today's Candid Story" is a new series of copyrighted, transcribed, radio programs featuring Karl A. Barleben, F.R.P.S., and sponsored by the International Research Corp., manufacturers of Argus candid cameras and accessories. Important photographic dealers from coast to coast are using this new series over their local radio stations.

"Today's Candid Story" is one of the first camera program series to be sponsored by a manufacturer in the photographic field, and gets away from the usual "talk" or "club" type, and presents fast-action, thrilling true-life camera dramas and entertaining as well as informative camera lore.

Among cities now hearing "Today's Candid Story" are: Cleveland, O.; Joliet, Ill.; Baton Rouge, La.; Tucson, Ariz.; Portland, Ore.; Wilkes-Barre, Pa.; Toledo, O.; Fort Wayne, Ind.; St. Louis, Mo.; Portland, Me.; New London, Conn., etc. More cities are being added to this "network" almost daily.

Consult your local newspaper for the time this series goes on the air in your locality.

Natural Color Prints made by the Wash-Off Relief Process from Kodachrome or Dufaycolor are being offered by Jay, P. O. Box 1341, Carmel, Calif. Prints, 4x5 inches, are \$2.00, and 8x10 inch prints \$6.00. Jay features a five-day service.

The Folmer Graflex Corporation have established new offices and show rooms on the

ninth floor of the Associated Press Building, Rockefeller Center, New York City. An exhibition of photographs are on view continually and visitors are welcome.

The Kodak Combination Lens Attachments, introduced by the Eastman Kodak Co., of Rochester, N. Y., offers the photographer the maximum in versatility. These attachments constitute a series of uniformly threaded units, each fitting into the others, and all fitting into an Adapter Ring which slips on or screws into the lens mount of the camera. The Adapter Ring permits any combination of attachments on the lens.

"The Story of Agfa Anasco" is a very attractive 28-page booklet published by the Agfa Anasco Corporation, of Binghamton, N. Y. The booklet describes the growth of Agfa Anasco from a small retail store, established by Edward Anthony in 1842, to the splendid corporation which we know. The book also describes and shows by pictures the manufacturing methods and modern plants used in producing Agfa Anasco's fine products.

"Easy Clips" are a new type of film clip recently introduced by the Agfa Anasco Corporation, of Binghamton, N. Y. "Easy Clips" are made of stainless steel and provide a positive locking grip that won't let films slip. They have both hooks and holes for hanging purposes and corners are smoothly rounded to prevent scratching. Lead weights are also available and may be easily attached.

Rud-Rubber Cement, a pure white rubber adhesive for mounting photographs, is offered by the Rudman Mfg. Co., 3535 Kenwood Ave., Indianapolis, Ind. Rud-Rubber Cement comes in a handy can with the brush attached to the inside of the lid, which keeps the brush soft and pliable and always ready for use. Orders will be shipped post-paid (in the U. S. only) for 25c a quarter pint and 40c a half pint.

Quality fine grain developing, printing, and enlarging service are being featured by Simpson's Camera Stores, 3764 Wilshire Blvd., Los Angeles, Calif. Prints and enlargements are on double-weight velvet paper. A price list and full details of this service may be obtained from the above address.

Guaranteed natural color prints are offered by the McKnight Photographic Laboratories, 10931 Weyburn Ave., Los Angeles, Calif. If the customer is dissatisfied with his prints, the McKnight Laboratories will refund the full amount (less postage and C.O.D. fee) when the print is returned within five days. A complete outline of this color service and price list is available and will be sent on request to the above address.

The Wollensak Optical Co., of Rochester, N. Y., is pleased to announce that Mr. Alan A. Cook is now a member of their scientific staff. Mr. Cook's association with Wollensak dates back to 1926, when he left to gain wider experience with the Eastman Kodak Co., and Bausch & Lomb. Now he has returned to Wollensak to serve as consultant, optical designer, and contributor to even greater achievements in Wollensak optical excellence.



Curtis Color-Scout on Tripod

The Curtis Color Scout, announced by the Thomas S. Curtis Laboratories, Huntington Park, Calif., is a new two-mirror, three-color camera of near miniature size, designed expressly for personal use. With lens and one dozen loads of film, the Curtis Color Scout weighs only seven pounds and its size is comparable with a $2\frac{1}{4} \times 3\frac{3}{4}$ reflex camera.

Kaufmann's Camera Mart, 356 Sutter St., San Francisco, Calif., offers a centrally located photographic service for the amateur photographer. Advice and aid with your photographic problems will be cheerfully given.

Burleigh Brooks, Inc., announces a 32-page catalogue of the complete Bee Bee line, which includes: Rolleiflex, Rolleicord, Linhoff, Bee Bee, Dolly, Dollina, Poth Derby, Certix, Rolleidoscop, Heidoscop, Altiscop and Eho cameras; Praxidos, Rajah and Bee Bee enlargers; Nikor tanks; Triax Tripods; Photo-Floods; Spot Lights, etc. A copy of this attractive, illustrated catalogue will be sent without charge to anyone interested. Requests may be sent direct to Burleigh Brooks, Inc., 127 West 42nd St., New York City.

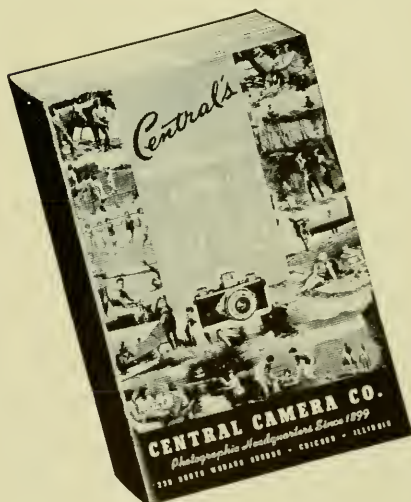
A new **Monotone Viewing Filter**, that enables the photographer to judge the tonal values of a picture as panchromatic film will record it, has been introduced by Burleigh Brooks, Inc., 127 West 42nd St., New York City. The viewing filter is made of dyed-in-the-mass glass and is supplied complete with leather case for \$1.00.

The Hall of Optical Science was opened April 20th in the Museum of Science & Industry, RCA Building, Radio Center, New York City, by the Bausch & Lomb Optical Co. The Hall of Optical Science translates the dry laws of optics into dynamic displays of light, motion, and color, making it easy for the observer to understand many of the

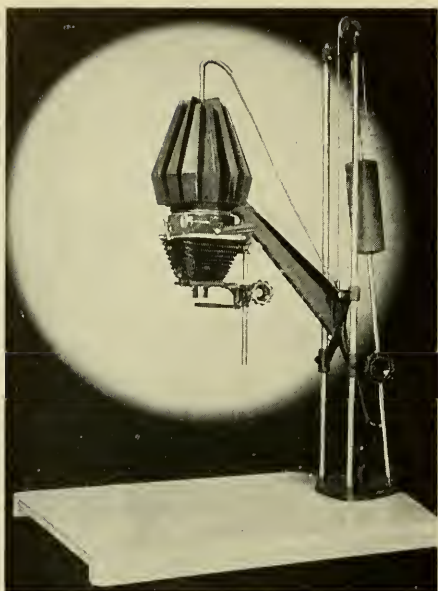
principles which guide the lens designer and optical engineer in the construction of optical instruments. Photographers visiting the New York World's Fair will find the displays in the Hall of Optical Science of great interest and value. A limited number of complimentary tickets will be available to visitors at the New York Office of Bausch & Lomb, 35th Floor of the RCA Building, but the modest admission charge to the Museum of Science & Industry should be no deterrent to those who want to see one of the most interesting sights that New York City has to offer its World's Fair guests.

Kodachrome enthusiasts will be interested in the announcement that the Color Process Laboratories, 837 No. Fairfax Ave., Hollywood, Calif., are now ready to process color prints from all present sizes of Kodachrome, 16mm. home movie up to 8×10 inches. After more than a year of careful research and experimenting, precision instruments have been constructed that make a high quality of work possible. Mr. W. L. McLaine and Mr. Friend F. Baker, photographers of many years experience, are partners in Color Process Laboratories.

A new and complete 260-page 1939 **Photographic Almanac** will be published May 25th by the Central Camera Co., 230 S. Wabash Ave., Chicago, Ill. The Almanac offers many articles on all phases of photography, written by eminent photographic authorities such as: Mario and Mabel Scacheri, Nowell Ward, Keith Henney, and J. V. Mansfield.



Complete details on all types of photographic equipment and accessories are also given. The new 1939 Almanac is available to all for a nominal charge of 25c, to cover cost of postage and handling. With the Almanac, the purchaser will receive a "refund coupon" entitling him to 25c credit on his first order for any merchandise listed in the catalogue.



The Skinner Restitutional Enlarger, a new and entirely different enlarger, has just been placed on the market. It enables one to correct for faulty perspective or distortion in portraits, architectural and similar shots AFTER the negative has been made. It enables you to add distortion to a picture for purposes of exaggeration and emphasis. In fact, for the first time, it gives the miniature camera owner the ability to do things heretofore only possible with a view camera!

The negative carrier is mounted on a "gimbal" and can be tilted in any direction by means of two micrometer screw controls.

The focussing and enlarger head elevation controls are micrometer friction drive with no backlash.

Quality features of the Restitutional Enlarger are: a cast aluminum high efficiency heat-dissipating lamp house; double condensers; takes $2\frac{1}{4}$ inch by $3\frac{1}{4}$ inch negatives or smaller; dustless, removable negative carriers; tripod type, all steel vibration free post; negative can be raised to a height of 42 inches from the baseboard; extra distance from post to lens center; extra large reinforced baseboard; and the enlarger head is fully counterbalanced. It sells for \$99.50 without lens, all types of lenses available.

The Restitutional Enlarger is made by the C. R. Skinner Mfg. Co., 290 Turk St., San Francisco, Calif., and further information can be obtained from them.

A free booklet describing Formula X-33, Thermolecular Fine Grain Developer, its properties and use, has been announced by the Fink-Roselieve Co., Inc., 109 West 64th St., New York, N. Y. The booklet gives the formula for those who wish to mix their own developer and gives time and temperature tables for all types of films. Formula X-33 offers: extremely fine grain; developing range from 65° to 85° F.; non-staining;

stable in all climates and temperature variations; fog-free, long scale gradations; no loss in rated emulsion speeds.

The Ford Motor Company announces a photographic contest for amateur photographers who visit the New York World's Fair. Four Ford V-8 DeLuxe Fordor Sedans and \$2500 in cash will be awarded in four contests. Pictures must include all or a recognizable part of the Ford Exposition at the Fair. They will be judged on the basis of their broad general appeal and interest rather than photographic excellence or technique. The judges will be Anton Breuhl, Lowell Thomas, William H. Jackson, and Walter Dorwin Teague. Four contests will be held and **all amateur photographers**, who are not connected with the Ford Motor Company or its agents, may enter in one or all of the competitions. Periods of the contests are: April 30 to May 31; June 1 to June 30; July 1 to July 31; and August 1 to September 4; all dates inclusive. Entries must be postmarked not later than the last day of the contest period and no picture may be entered in more than one contest. The First Prize Winner of the Ford V-8 will be transported free-of-charge to the Ford Exposition at the New York World's Fair to receive the award. Entry blanks and copies of the rules may be obtained from any Ford Branch or dealer or at any photographic store. Photographers who will visit the New York World's Fair should obtain a copy of the rules at once as this contest offers an excellent opportunity to profit from your trip to the Fair.

Answers to

"What Is Your Photographic I.Q.?"

1. False. It should be: The faster the film the slower is its rate of development. Check your developing charts to prove this to yourself.
2. True. Sal soda is another name for crystals of sodium carbonate. It is not desirable for photographic use because its strength is not uniform: the crystals dry out under normal weather conditions and gain in strength.
3. True. Orthochromatic in the true sense of the word would indicate a film that is sensitive in correct relation to all colors. However, today orthochromatic is erroneously accepted to describe a film not sensitive to red.
4. False. The new P & H Process was discovered by Mr. Frank Perry. It was H. C. Benedict who first wrote an article in Camera Craft (March issue) describing this new method of developing.
5. True. If a colored object is photographed through a filter which absorbs that color, it photographs black. Green absorbs blue and red light.
6. False. Attention must be paid to the condition of the gelatin of the emulsion resulting from particular manufacturing methods. Some surfaces are so hardened that not only is inking difficult but in some instances impossible. Some manufacturers make a stock primarily to be used for bromoil work.
7. True. It hardly seems possible but the circle of confusion of lens used on the better miniature cameras does not exceed $1/800$ th of an inch even with the diaphragm wide open.
8. False. Excellent equipment is available today that records high quality sound directly on 16 mm. motion picture film.
9. False. In the apothecaries' weight, the dram is one-eighth part of an ounce; in the avoirdupois weight the dram is one-sixteenth part of an ounce.
10. True. It will be observed that there are forty frames to a foot of 16 mm. and eighty frames to a foot of 8 mm. film. Consequently, the equivalent in 8 mm. of a given footage in 16 mm. will be exactly half, so that for a certain length of projection time twice the length of 16 mm. will be needed as for that of 8 mm.

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CAMERA CRAFT



"Laro"

Western Photo Show

John T. Closs

1939
LIGHTING OUTDOOR PORTRAITS . William Mortensen
COLOR AND THE STEREOSCOPE Jack Wright
THE PRINTER George J. Glover
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William Mortensen

Lighting The Outdoor Portrait

William Mortensen

Part One

 **UTDOOR** portraiture is in most cases the first problem that the average amateur tackles. It seems such a simple matter. He has his camera, and has learned how to load it and what buttons to push. The sun provides large quantities of illumination. For subjects, friends and family are readily available and all too willing. For setting, there is the garden or the front steps. Very simple: just get all these items together—and there's your portrait. So our amateur leads his wife, little sister or grandmother out into the sunlight and pots away.

What does he get? Probably something very much like Figure 1. He is vaguely disappointed because he rather fancied a result more along the lines of Figure 2 or something he had seen in last week's *Life*. But, as it bears a sufficiently close resemblance to the wife (or little sister or grandmother) to satisfy him, he goes on making variants of Figure 1. However, there eventually comes a time when he sees the shortcomings of his work and desires to make a really pleasing and effective pictorial presentation of his material.

Outdoor portraiture, although it usually is one of the first projects undertaken by the hopeful amateur, is really one of the most difficult of pictorial problems. But it is a problem worth the trouble: a good outdoor portrait has a directness and sincerity that is rarely achieved in the studio product. It is an excellent field for photographic training for the amateur who goes about it correctly. The one who has really *mastered* the technical



Figure 1

difficulties involved in outdoor portraiture, the controlled conditions in the studio will seem like child's play.

Four Main Problems of Outdoor Portraiture

In general, the making of an outdoor portrait involves four main problems. These are:

1. The manipulation of the camera.
2. Light.
3. Backgrounds.
4. Selection and arrangement of material.

For these articles, I want to deal with the most important (and probably the most difficult) of these problems—*lighting*.*

Basic Limitation of Daylight

One limitation of daylight determines its use and application. The limitation is simply this: daylight is derived from a *single dominant source*.

This may appear to be much too obvious a fact to require such emphasis. But a realization of it will do much to help one to the correct use of outdoor light. This fact simplifies one's problem and enforces the use of a certain amount of good taste. Only man, working with artificial light in a

*In the illustrations to this article, we are concerned merely with the quality of the LIGHT. In order to avoid introduction of complicating factors, all the pictures have been made on Ortho stock without filter. The use of filters, of course, may greatly alter the relationship of tones and thus cause apparent change in the lighting effects. The relationship of filters to outdoor lighting will be treated later in this series.



Figure 2

studio, can produce such a monstrosity of lighting as that shown in Figure 3—several competing light sources shining from several directions.

Conditioning Factors of Daylight

There are at least four variable factors that operate to control the quality of daylight. These four are:

1. Angle of light. According to the time of day, the sun's angle of illumination may vary from horizontal to nearly vertical. (Figures 8 and 4.)
2. Camera angle. The effect of horizontal illumination may vary greatly, according to the angle of the camera relative to the angle of the light. For example, the horizontal light may be made to yield a flat front illumination (Figure 8) or a strongly marked cross-light (Figure 9) according to the choice of the camera angle. There are an infinite number of possible combinations of these two factors. Not only may the camera shoot parallel with the direction of the light (as in Figure 8); or at nearly right angles to it (as in Figure 9); it may also shoot in opposition to the direction of the light (as in Figure 5). Each of these combinations has distinctly different characteristics, and there are possible an infinite number of intermediate combinations.

Note that the effect of the angle of the light is largely dependent on the relative angle of the camera. Even a direct over-head light

may be given the aspect of a horizontal light if the camera is placed so as to shoot down on the subject. (Imagine, for example, your subject lying on the beach and your camera shooting from above.) Such a freakish situation is not apt to occur frequently in outdoor portraiture, to be sure, but bear in mind that it is impossible to generalize broadly about the effect of various lighting angles without taking camera angles into account also. It is the *interaction* of these two factors that is important.

3. The third of the conditioning factors of daylight is that of *diffusion*. Such things as fog, smoke or atmosphere serve as natural diffusing elements, and may considerably alter the effect of sunlight. They not only reduce the intensity of the light, but also *spread* it. In terms of studio equipment, atmospheric diffusing elements convert the sun from a spot light into a "broad." The degree of diffusion may vary widely—from the slight softening induced by the atmosphere at sunrise or sunset to the extreme diffusion of a heavily over-cast day, when the light has scarcely any apparent direction and contrasts are reduced to a minimum (Figure 6).
4. The fourth of the factors that condition daylight is *reflection*. Natural reflecting elements are provided by such things as clouds, water, sandy beach, stucco walls, etc. Artificial reflectors are also frequently employed in outdoor portraiture. Reflecting elements serve in a different manner to accomplish the same end as that served by the diffusing elements—i.e., to reduce the gross contrast of daylight. They do this by projecting additional illumination into the shadowed areas of the subject. (Compare Figures 7 and 9.)

Reflection produces a sort of natural cross illumination. But this sort of cross light never detracts from or rivals the brilliance of the principal source of illumination—which is just what artificial lighting is apt to do. (Note Figure 3.)

Protean Variety of Daylight

The constantly varying interrelationships of these four factors make daylight a thing absolutely incapable of accurate definition. Every minute of the day, daylight changes in intensity and quality. Nor is it any two days the same.

But in all these infinite variations, there is no such thing as an intrinsically bad light or an intrinsically good one. There are only good and bad *uses of light*. If the light in your outdoor picture seems bad, don't blame the light but blame your ineptness that used the light wrongly and applied it to the wrong kind of subject matter.

There are, to be sure, certain qualities of sunlight that are more generally useful for purposes of outdoor portraiture, and most of the best average examples will be found to employ them. But this is not because this light is *better* than any other: it is simply because it better fits the average type of subject matter. With the wrong kind of subject matter, this average type of light can be made to seem bad. There is, in short, no possible variant of sunlight that, given the right subject matter, might not be used for outdoor portraiture.



Figure 3



Figure 4



Figure 5



Figure 6—Type A

What Light Does

Reduced to simplest terms, daylight (or any other light) does just two things:

1. It illuminates.
2. It casts shadows.

In its illuminating capacity, light reveals the differences in local tone or coloration in the object it shines upon. It shows the blue eyes, the red lips, the brown hair of your portrait subject. Photographically, these differences are converted into various tones of gray.

In its shadow casting capacity, light reveals protruberances on the illuminated surface. It thus reveals texture and larger plastic elements.

In the transitions between light as an illuminant and as a caster of shadows, modelling is revealed. Modelling consists of gradual deviations in the direction of planes. Photographically, modelling appears in half-tones, in gradations between light and shadow.

The nature of the subject matter will determine whether light should be employed as an illuminant (revealing local tone and color), as a caster of shadows (revealing texture), or in the intermediate phase (revealing modelling and gradation).

Modelling is the essence of the human face, since the latter consists not only of the simple basic structural planes, but of innumerable subtle transitions and modulations from one plane to another. These transitions can be realized only in terms of gradation and half tone. Therefore, for most portraiture (whether indoor or outdoor) the best sort of light will be found in the intermediate types that reveal modelling and gradation, rather than mere texture or mere local tone.

The Five Basic Types of Light

On the basis of this dual function of light, we may roughly divide light as applied to outdoor portraiture into *five basic types*.

Let us first note the two extreme types (Type A and Type E).

The first of these—Type A—displays light *solely as an illuminant* (Figure 6). It is the type of light that may be encountered in the early morning (half an hour before sunrise), in the evening (half an hour after sunset), or on very gray and heavily overcast days. There is the fullest possible amount of diffusion and reflection, so that the illumination is almost equally strong from all quarters of the sky. There is, therefore, the minimum of shadow and modelling; but all differences in local tone or coloration are fully displayed.

The other extreme type—Type E—displays light principally as a *caster of shadows* (Figure 7). It is the direct light of the sun from a cloudless sky during the middle part of the day. There is practically no diffusion or reflection, so that the shadows are black and empty of any detail. Nothing is revealed of the subject except its textures and protruberances. Owing to the harsh contrasts, there is practically no modelling or gradation and little differentiation of local tone.

As we shall see in the succeeding installment of these articles, the extreme types are very limited in application. Much more useful to average workers are Types B, C, and D.

Type B is the more useful form of Type A. Like Type A, it emphasizes



Figure 7—Type E



Figure 8—Type B



Figure 9—Type D



Figure 10—Type C

differences of local tone. But it lacks the extreme degree of diffusion of Type A and has, therefore, well marked *direction*. So Type B displays not only the differences in local tone in the subject but also exhibits an extreme amount of gradation and modelling (Figure 8). This type of light is encountered rather early in the morning or late in the afternoon, when there is a softly overcast sky that diffuses the light but does not destroy its direction. Among the studio lightings described in *Pictorial Lighting**, Type B corresponds most closely to the so-called "Basic Light."

Type D is the more useful form of Type E. Like Type E, it emphasizes the shadows and the textures revealed thereby. But Type D also utilizes a considerable amount of reflection—either by taking advantage of natural sources of reflection or by employing artificial reflectors—to break into the blackness of the shadows and suggest the presence of detail in them (Figure 9). Various circumstances may produce this sort of light: when the direct light of the sun is reflected from large white cloud masses in the opposite quarter of the sky; when light from a fairly high sun is reflected from water or sandy beach; or when direct sunlight is modified by artificial reflectors. Among the light types mentioned in *Pictorial Lighting*, Type D corresponds in most particulars to the "Dynamic Light."

Type C (Figure 10) designates the numerous variants intermediate between Types B and D. It displays, in the light areas, the full modelling and gradation characteristic of Type B, but also has ample areas of rather soft shadows characteristic of Type D. Type C is encountered when a low angled sun is slightly diffused by thin mist or clouds and also undergoes reflection by cloud masses in the opposite part of the sky. Among the combinations described in *Pictorial Lighting*, Type C resembles somewhat both the Plastic and the Modified Basic Light.

These, then, are the five general types of light that the maker of outdoor portraits is likely to have to deal with. In next month's article, we will discuss the probable uses and applications of these five types.

This and the article to appear next month are excerpts from Mr. Mortensen's forthcoming book on OUTDOOR PORTRAITURE, to be published in the fall of this year.—Ed.

*William Mortensen, *PICTORIAL LIGHTING*, Camera Craft, 1935.

Color Transparencies And The Stereoscope

Jack Wright

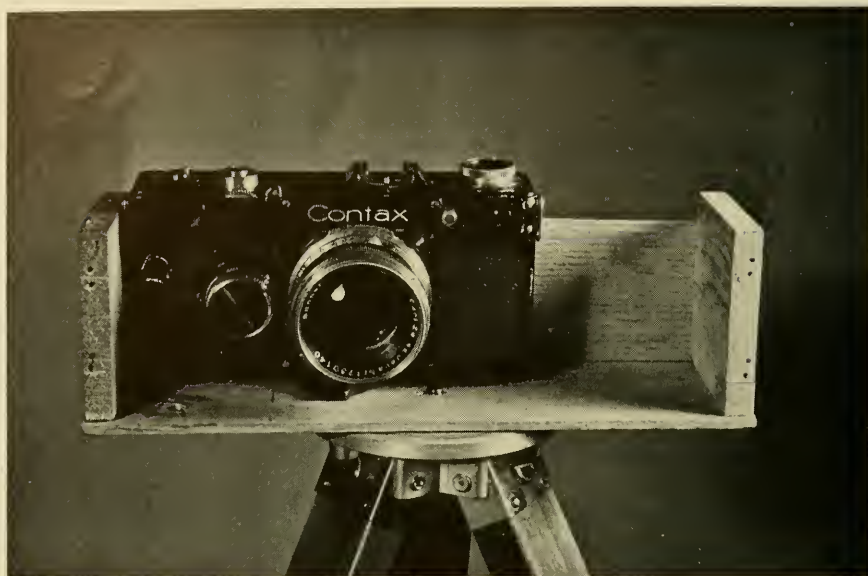
THE reason stereoscopic photography has not received the attention from amateur photographers that it deserves is because they regard it as old-fashioned. The stereoscope with its accompanying views of Niagara Falls and the Columbian Exposition was a fixture on every parlor table during the "gay nineties" and, being moderns, we look askance at everything associated with the handlebar mustache and bicycle-built-for-two era.

The truth is, however, that stereoscopic pictures, with their illusion of depth, have always been by far the finest record pictures, and now that color has been added through Kodachrome and Dufaycolor, these pictures with their three dimensions are almost irresistible.

The purpose of this article is to tell how to take stereoscopic transparencies in Kodachrome or Dufaycolor and how to view them with an inexpensive viewer made of an old pair of field glasses, or other simple lenses, and a few bits of wood. We will consider first the method of taking the pictures.

It must be explained at the start that when we are taking stereoscopic pictures with a one-lens camera we must look for subjects that are absolutely stationary. With the regular two-lens stereoscopic camera we can stop motion, but in this article we are considering the making of pictures with an ordinary one-lens, 35 millimeter camera, like the Retina, Argus, Contax, Leica, etc., such as most amateur photographers possess.

The fact that the subjects must be motionless need not deter us from entering this fascinating branch of photography, however, for the range of possible subjects—landscapes, still life, flowers, parks, gardens and even



Box which holds camera for taking stereoscopic photographs. The first picture is taken with the camera snug against the back of the box and against its right end. After the first picture is taken the camera is slid to the left end of the box and a second photograph taken. Inside length of the box is exactly $2\frac{1}{2}$ inches longer than total length of the camera.

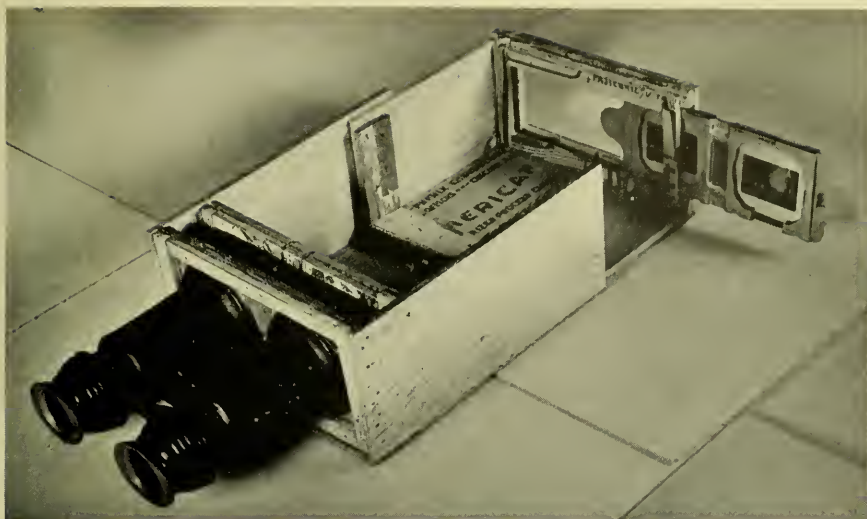
portraits where the subject is able to remain absolutely still for a minute or two—is almost limitless. As a matter of fact few fields are closed to us except street and ocean scenes and sports.

All that is needed to secure a pair of Kodachrome slides possessing stereoscopic qualities is to take two pictures of the same scene or object from viewpoints $2\frac{1}{2}$ inches apart. In order to do this we need only a tripod and a device for shifting the axis of the camera lens $2\frac{1}{2}$ inches from right to left.

The simplest method is to secure a small wooden box like that shown in the accompanying photograph, the inside length of which is $2\frac{1}{2}$ inches longer than the total length of the camera. The box shown in the picture formerly contained a popular brand of cheese but a cigar box of suitable dimensions or any similar box will do as well.

The box is fastened to the tripod head with a nut of the same size as the screw which ordinarily engages the threads in the bottom of the camera. This may be secured from a hardware store. It is well to make sure that the box is rigid and firm on the top of the tripod. The camera itself must be free to move from one end of the box to the other.

In taking the pictures, the camera is placed firmly against the right hand end of the box and against the back. The box should be as level as possible. The exposure is then calculated and the first picture taken in the usual way. The camera is then moved along the back of the box until it



This is the partly constructed viewer, showing the manner in which two boxes slide, one within the other, to permit variation in the distance from lenses to transparencies. At the left is shown the way the field glasses are fixed in one end of the larger box. At the right the slide carrier is shown, partly inserted inside the end of the smaller box.

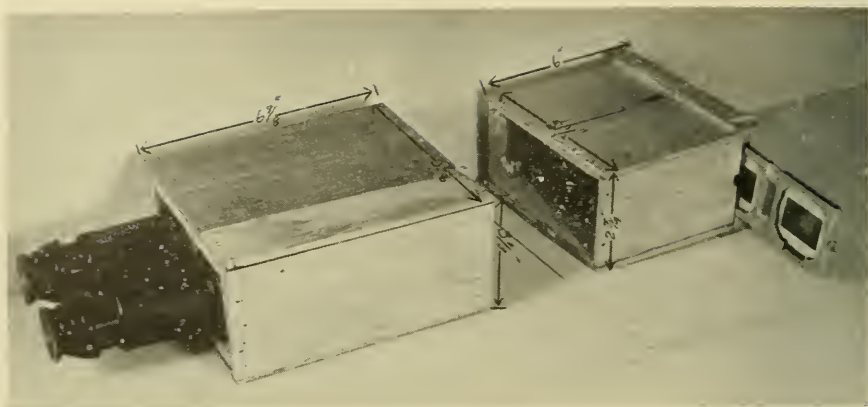
is firm against the left end of the box. The second picture is then taken. It is necessary to make sure that the camera is firm against the back and against the end of the box at all times, but a little care will accomplish this.

In taking the pictures it is necessary to watch closely to avoid movement. If the scene is a park or garden a time should be chosen when movement of the trees and foliage is at the absolute minimum, for movement of any kind produces a sort of "ghost" effect that is very disturbing. The first stereoscopic pictures taken by the writer were in a public park. Flowerbeds, trees, lawns and a building were in beautiful register but a small automobile of popular make came into view after the first picture had been taken, and, being unnoticed by the photographer, appeared in the second picture without having been in the first. The effect was of a "ghost" auto, which made the pictures valueless except for a curiosity.

Other than to watch out for motion of any kind, the taking of these stereoscopic transparencies differs in no way from the making of any sort of transparencies with Kodachrome or Dufaycolor.

In place of the box in which the camera shifts back and forth those desiring to do so may purchase from the Rollei-flex people, for whom Burleigh Brooks of New York City is the agent, a simple little device which is screwed to the top of the tripod and to the camera and which permits the camera to shift back and forth the exact distance needed. It is also equipped with a small level. The price is between \$6 and \$7. The Leica people have a similar device for approximately the same price and doubtless there are many others.

I would advise the beginner, however, to rig up the comparatively



This illustration shows the viewer practically complete. The dimensions shown are outside dimensions and may be varied according to focal length of field glass lenses.

crude but extremely cheap box device for taking his first pictures, until he learns whether or not this type of photography appeals to him.

The same aim of inexpensiveness is carried out in building the viewer. The essentials of this are a pair of simple convex lenses, mounted in one end of a light-tight box, with the transparencies at the other. The box needs to be light-tight so that the only light coming to the eyes will be through the transparencies themselves.

The most satisfactory way of securing lenses is to purchase an old pair of field glasses and remove the eyepiece lenses, leaving only the two larger lenses. Second hand field glasses may be secured from a pawn shop, in fact the writer was fortunate enough to find a pawn shop with a pair of field glasses from which the eyepieces were already missing. These the pawn shop owner was delighted to sell for 75 cents, since they were useless for their original purpose.

The reason field glasses furnish the best lenses for our use in this project is because the lenses are already mounted the correct distance from the eyes. All that is necessary is to build a light-tight box around the larger end of the field glasses, extending out far enough to contain the two mounted transparencies.

In order to determine the distance from the lenses at which to mount the transparencies it is first necessary to mount the glass slides containing the transparencies in a piece of cardboard. To do this cut a piece of cardboard approximately $2\frac{1}{2}$ by $6\frac{1}{2}$ inches. In this cut two holes slightly smaller than the glass slides. These holes in the cardboard should be exactly $2\frac{1}{2}$ inches from center to center.

With Scotch tape bind the glass slides containing the transparencies over these holes, taking care to place the picture that was taken at the right hand end of the camera box over the right hand hole and the picture taken at the left end of the box over the left hand hole. This is important, for if the slides are reversed the stereoscopic effect is spoiled.



The viewer in use, with a desk lamp as illumination. A light may be built into the end of the viewer, with ground glass between the light and the transparencies, if desired.

Thus having mounted the glass slides firmly on cardboard, we have a pair of pictures with which to experiment.

Place the field glasses, with their smaller eyepiece lenses removed, level on a table. Place a light so its rays will shine through the transparencies and through the lenses of the field glasses into the eyes. Then look through the field glasses, moving the cardboard containing the transparencies back and forth until the point is found where only one picture is seen. This picture will be found to be stereoscopic, near objects appearing near and distant ones distant—in other words the picture will have three dimensions.

This correct distance of the transparencies from the lenses is not difficult to find. Once found it should be measured and marked down, to be used in building the light-tight box.

Since we are dealing with fairly small pictures, taken with a camera of short focal length, it is possible to build the viewing box so that the distance from lenses to transparencies will be fixed, and such a box will be normal and satisfactory for most eyes. The viewing box described here, however, permits a variation of about three inches in the distance from lenses to transparencies, thus allowing the viewer to be used comfortably by people with all types of eyesight. Building this variation into the viewer adds a little more work to its construction but saves the possible embarrassment of later finding a person by whom a fixed-distance viewer could not be used.

Having determined the distance that the transparencies must be from the lenses, the next step is to construct the viewer itself. For this any light

wood, which is soft and easily worked, may be used. The writer used a couple more cheese boxes but cigar boxes would do as well.

Two boxes are now constructed which have no ends. One of these is small enough to slide snugly inside the other, with a telescope effect. Laid end to end they should be about six inches longer than the distance the transparencies are to be placed from the lenses. The inside dimensions of the larger box should be such as to allow about half an inch all around the lenses of the field glasses. The approximate dimensions are marked on the accompanying photograph.

In one end of the larger box are mounted the field glasses. This is done by cutting two pieces of wood about an inch wider than the diameter of the field glass lenses and long enough to project half an inch beyond the lenses on either side. These two pieces of wood must fit snugly inside the larger box. They are then split down the center and two semi-circles are cut in each, just large enough to hold the outer rim of the field glasses firmly. The split pieces are then reassembled and fastened together around the ends of the field glasses, small pieces of wood being used to hold them together. The result is a wooden mounting for the field glasses which holds them firmly. They can then be mounted in one end of the larger box, as shown in one of the accompanying photographs.

All that remains is to mount the slides in the end of the smaller box. There are several ways of doing this. The writer found the most satisfactory method was to use the slide carriers from a Society for Visual Education (or Argus) projector, which happens to hold the two glass slides the correct distance apart for stereoscopic viewing. This slide carrier was mounted in the end of the smaller box in such a way that it moved snugly back and forth. It could then be removed and the pairs of transparencies changed.

To mount the slide carrier, take two pieces of wood about 3 by 5½ inches. In these cut two square holes 1½ inch by 1½ inch, midway between the top and bottom and midway between the ends. These holes must be 2½ inches from center to center.

Two more pieces of wood are secured slightly thicker than the slide carrier and 5½ inches long by ¾ inch wide. These are placed between the two pieces of wood in which the square holes have been cut in such a way that the slide carrier can slip back and forth carrying the pictures into position in front of the lenses. These pieces of wood are then glued together and fixed in one end of the smaller box.

These slide carriers mentioned can be purchased from the Society for Visual Education, 327 South La Salle Street, Chicago, for about \$2.50. Needless to say, however, such a slide carrier is not necessary. The pairs of slides can be mounted permanently on pieces of cardboard, as was previously described, and in that case they can be slipped into the viewer as a unit. Likewise a carrier which will allow the insertion and removal of the separate slides can be easily made of wood.

To do this we take a piece of wood about 3 by 5½ inches and slightly thicker than the glass slides. Notching down from the top of this piece of wood, we cut two rectangles, 2 inches wide and 2¾ inches deep. These will be 2½ inches from center to center. This will just permit the slides to slip down into place.



"Spuds"

Robert Reis

Western Photo Show

On either side of this piece of wood, in the form of a sandwich, we place other pieces of wood in which two square holes have been cut, the holes being $1\frac{1}{2}$ by $1\frac{1}{2}$ inch and $2\frac{1}{2}$ inches from center to center. When the three pieces of wood are glued together the slides will slip down into the center of the wooden "sandwich" and will be held just $2\frac{1}{2}$ inches apart, the pictures showing through the squares cut in the pieces of wood.

Whether the slide carrier is of metal or wood, it is fixed in the end of the smaller box, as shown in the illustration. The two boxes are then slipped inside one another and the viewer is ready to operate.

If any cracks appear paper can be pasted over them and the entire viewer, inside and out, can be given a coat of flat black paint.

In operation the viewer is held so that a fairly strong white light shines through the transparencies. It is possible, of course, to build an electric light into the end of the viewer, just beyond the transparencies and with a ground glass between the lamp and the pictures. This adds to the bulkiness of the viewer, however, and is really not necessary.

In taking stereoscopic pictures, the illusion of depth is increased if a scene can be taken having moving objects in the foreground, other objects

in the middle distance and still others in the background. Since we are operating with a tripod it is best to stop down the lens as far as possible, unless there are slight breezes which might cause movement in a long exposure.

In taking portraits a person must be found who can hold the same pose long enough for two pictures to be taken. This is not as difficult as might at first appear, particularly if the eyes are fixed on some definite point and held there.

While the taking of stereoscopic pictures with a one-lens camera has certain limitations, those very limitations constitute a sort of challenge to the photographer, which adds zest to the diverting pastime of making three-dimensional pictures in full, gorgeous color.

Sell Your Printer

George J. Glover

THERE comes a time in every photographer's business life when it becomes necessary to find a field for pictures; to create a need for photographs in some field that has heretofore been almost barren of pictorial aids. This period in my business occurred just a year ago.

In my little town of 20,000 people, I had been established for five years. I was competing with three other full time photographers who were doing fine work. Between the four of us, we had at one time or another, photographed about everyone and everything in town. I had developed an amateur film roll service but it was just about paying my expenses, I had depended on my pictorial and portrait work to increase my income and it wasn't materializing. I had tried a contest but it didn't work out so well. It did bring me business for a few weeks but it eventually died out. I spent my days and evenings trying to figure some way out of buying a lot of red ink.

At this time, I needed some new letter heads and so I dropped in on Jim Johnson, my printer, just to place the order. In the course of events, I asked Johnson how business was.

"Terrible," Johnson replied, "I'm barely getting along. I've tried everything—advertising, personal contact—but I can't find enough jobs to keep one press busy."

His short outburst struck home. I might have been the author of his speech myself. I was barely getting along. I'd tried everything—advertising, personal contact—but I didn't seem to be able to dig up any pictorial outlets. When evening came, I went home much troubled. During the night, though, I conceived an idea that I felt might be a solution to my problem, and, perhaps, a solution to Johnson's, as well.

I went down to the studio bright and early the next morning. A 5 x 7



Western Photo Show

Marvin Tipp

view camera, my 4 x 5 Graflex, a dozen plate holders and two film packs were quickly loaded in the back end of my coupe and I was off.

After a few hours of steady driving, I saw the San Joaquin River through the windshield. I turned down the road parallel to the river and finally came to Richardson's River Camp. Located in a choice California valley, Richardson keeps his camp open all year around, and his guests come from practically all the Eastern states. In September, though, he usually fixes things up for the winter crop of visitors. I found Mr. Richardson fixing a small motor boat on the river. I knew him slightly.

"Hello," I greeted, as I dropped both my Graflex and view camera and sundry equipment on the ground. "Looks like you're pretty busy. Getting ready for your winter dudes?"

"Yes, it won't be long now," Mr. Richardson replied, stepping out of the boat. "What brings you to this neck of the woods?"

I didn't want to let the idea go just then, so, I just answered as nonchalantly as I could:

"I am just wandering about, here and there, taking a few pictures. You don't mind if I look around your place do you? I might be able to snap something that will be worth thousands?"

"Go ahead, if there's any picture around here worth thousands, you'll split won't you," Richardson chuckled, as he stepped back in the launch again.

I loaded up with my cameras again and started down the river bank. Richardson's cabins were lined up on both sides of the bank. They were nice three room affairs made out of simulated logs and he'd kept them in good repair. I found the place I set out for. A small court of six cabins grouped among a stand of poplar trees. I proceeded to set up the view camera, slipped a filter over the lens, picked a spot where I could see all six cabins in my ground glass, and I loaded up and snapped the shutter. I then moved the camera inside the nearest cabin, pulled out my flash gun and promised myself thoughtfully that I'd put the picture of the pretty rock fireplace, the rough hewn beams and the hand-made furniture on a plate, or die in the attempt. I thanked my lucky stars that I had loaded the plate holders with super-pan, as I clicked the shutter.

I moved down to the river. The white sand of the beach intrigued me. So I stepped between two shade trees, set up the view camera, looked through the ground glass and lo! and behold! I saw the white of the beach, the blue of the water and the white of two small clouds framed between the trunks of my two towering elms. A filter quickly went over the lens and before you could say Jack Robinson, I put the scene down for good.

Back I traveled toward the boat landing. As I drew near, I saw that Richardson's son, Jack, was helping a pretty looking girl into his canoe. I pulled the tab on the Graflex, thumbed the shutter, pulled another tab, focused on them again, and as they paddled down river, I snapped them straining at the paddles.

Mr. Richardson hadn't noted me with the Graflex, so, just for luck, I took a shot of him as he turned to dip his brush in the paint bucket. I walked over and thanked him for letting me browse about, then I headed for the studio.



"Angelita"

Harry Baskerville

Western Photo Show

In the darkroom I poured out some D-76 and set to work developing the shots. They were all pretty well exposed and their clearness astounded me. So far, my idea was moving forward fast.

After making two prints of each shot, I hurried over to Johnson's Print Shop. He looked pretty glum when I rushed in. The smile I had on my face though, made him perk up. I laid the prints on the table and motioned for him to look at them. He bent over, looked at each one in turn, and then said:

"A nice mess of pictures. Looks like Richardson's place. What's he going to do with them?" he asked rather dejectedly.

"He isn't going to do anything with them," I replied. "But, we are."

Johnson stared at me in amazement—before he could speak, I went on.

"Johnson, I want you to lay out a 'dummy' piece of direct mail advertising. Something like the one you did for that trucking firm a couple of years ago. This one will be for Richardson's camp. Paste these pictures on the 'dummy' and figure your end of the cost. I'll send you a bill for the pictures at \$5.00 each. We'll see if we can sell 50,000 of these mailing pieces to Richardson."

Johnson fell for the idea right away. He built up the "dummy"—figured his cost, added it to the cost of the pictures and found that he could quote Richardson a rate on 50,000 that would be lower than the price that Richardson had paid for a less impressive, straight copy, mailing piece, two years before. I left it up to Johnson to sell the idea to Richardson.

Mr. Richardson was so impressed with the "dummy" for the mailing piece that he immediately ordered 50,000. I got a check for those eight photographs from Johnson's Printing Company the next day. It looked as if the idea was working out.

The Inland Ice Company was my next objective. The ice company was trying to compete with the electrical refrigerator and they were offering the ice consumer all sorts of premiums. I went to work and built up a series of photographs that showed the interest the ice company displayed in making things easier for the housewife. One shot showed the dripless canvas ice cover that the delivery man used. Another, the new ice cube device which was loaned to each regular ice purchaser. Then I took a group picture of the drivers and their trucks. These I also took to Johnson. Again a sale. 25,000 mailing pieces for the ice company, and again a sale of photographs for me.

I picked a laundry for my next point of focus, literally and otherwise. Here Johnson and I fell down for a moment. The laundry owner had tried direct mail and found it didn't justify the expense. Thus, although he admitted the pictures and copy were neat, he didn't feel as though he could purchase the outlay, he told Johnson. I thought a moment, glanced through the local paper and then decided to call on the laundry owner. I suggested to him that he use a picture to illustrate each ad he placed in the paper, perhaps, a picture a week. It worked! the laundry owner fell for the idea, because he liked the pictures of his washer, and the rest of his equipment. Johnson got the photoengraving job and I sold ten pictures of the laundry (as well as two other sets of the prints to a couple of laundry employees who wanted them). Some weeks later the laundry owner phoned me and said that his business had increased quite a bit, and, although he may have been wrong, he attributed it to the illustrations.

In working with your printer, here are a few tips that may come in handy.

In preparing prints for your "dummy," make them any size necessary—but when you send them to the photo-engraver they should be at least 8 x 10 inches.

Make sure that you have good contrast. In making up the series for the mailing piece, pick views with good backgrounds which are impressive,



"Mr. & Mrs."

V. P. Hollis

1st San Francisco International Salon

and take your shots of people or animals—candid. I use a Graflex for my candid shots; a view camera for the pictorials.

Charge good rates for your work. Cutting rates isn't good business and good work should be paid good rates.

Pick a business that caters to a large group of people. A hotel, cafeteria (Can't you imagine what an impression a picture of the gleaming white kitchen would make?), a grocery, a dairy, a department store—or any other business that caters to a large group.

Get on good terms with your printer and give him a chance to suggest ideas. Printing and photography are closely related trades and you both can exchange ideas of value.

If things aren't going so well drop in and see your printer, talk the idea over with him. I sold three hundred prints to my printer last year. . . . How many will you sell to yours this year?

Photographic Bas-Reliefs

Alfred Weber

BROMIDE enlargements can be converted from ordinary portraits into realistic three-dimensional pictures. No expensive tools are needed and the process is easily carried out. The tools needed are a set of clay modeling tools and if these cannot be obtained, two sticks, one with a rounded end and one with a sharp end, may be used.

A double weight semi-gloss print is made of the negative. Double weight is used because it can be more deeply embossed without cracking the emulsion. The print is laid face down on a piece of glass held over a strong light. The features are carefully traced in pencil on the back. When this has been done the print is ready to be embossed. Place it face down on a soft pad made of several layers of cloth and begin the work of raising the head. This is done by gently stroking the paper within the outline of the head with a circular motion. After this is done the eyes, nose, ears, etc., are all brought to their proper perspective, then the lines about the mouth are made with a sharp tool.

After the embossing is completed it should be filled in with Plaster of Paris. Make a thin mixture of the plaster and fill in the figure, being careful



Tracing



Embossing



Filling with Plaster of Paris

not to leave any air-bells. Make the layer of plaster a little higher than the surrounding background to allow for contraction. After it has dried the high spots can be sandpapered off.

When the plaster backing is completely dry the portrait should be mounted. Wood is the best material for this. Apply a coat of good glue to both surfaces and leave to dry until sticky then press the picture onto the wood and hold it there by a weight until it is completely dry.

The secret of success in this process is to know when to stop. By stressing the paper too far the image will be stretched out of shape. It is better to give a suggestion of depth and let the observer imagine the true shape of the subject.

Short-Cut To Black And White From Kodachrome

Howard R. Boyle

CONVERTING my miniature Kodachrome transparencies into black and white prints by the usual method was, to my mind, a time-consuming job. Sometimes when it was necessary to get a print from my color shot in a hurry, I had to rush around fuming impatiently for at least half an hour before the paper negative was fixed, washed, and then dried to make my contact print. Finally, by extensive experimenting, I conceived a method which deserves passing on to my fellow miniature camera enthusiasts. The following method gives surprisingly good results, but is *not* put forward as a substitute for or an improvement on the usual procedure. It is purely a short-cut for use in emergencies.

Insert the transparency to be printed in your enlarger so that the picture is projected upside down on the enlarging easel.

Take a sheet of enlarging paper the size you want your final print to be. I use Velour black, soft, single weight. Then project your image upon this paper and make an exposure the same as you would for a regular negative.

Then develop fully in D-72 (1-2) for maximum contrast as shown in Figure 1.

Take a second sheet of enlarging paper (normal) the same size as your paper negative and lay it emulsion side up on your work table. Remove your paper negative from the developer, and without putting it in the short stop, squeegee it emulsion to emulsion to the second sheet, so as to form a perfect contact. This must be done very quick and smoothly, and it may take a few tries at first before a perfect print is obtained. Then this combination should be held in your hand and exposed to the light of a 100-watt bulb at a distance of one foot. Exposure time should be as short as possible and is obtained by quickly flashing the light on and off. If the exposure is not enough with such a flash, use a stronger lamp. Exposure time must be kept as short as possible since the paper negative is still wet with developer, and will lose gradation by blackening all over if a long exposure is given. Proceed in the usual manner to develop this second sheet for the regular time in D-72. Your paper negative may be saved by inserting it in the short stop as soon as possible after your print is made, then it can be fixed in the same way as an ordinary picture.



Figure 1. Paper Negative



Figure 2. Finished Print

After having made a few of these prints by my method, remarkable results can be obtained in making black and white prints from your Kodachrome transparencies, in record time.

The finished picture is shown in Figure 2.

Cinema Section

Edited by

William A. Palmer

When You Show Your Movies

William L. Morgan

THERE is a slight lull in the conversation after dinner—a fine opportunity for you, an enthusiastic cinecamateur, to show your movies! Do your guests smile wanly as they exchange “now-we’re-in-for-it” glances? Does another member of the family come to you quietly as you are getting the projector out of the closet and anxiously suggest that maybe they would rather play bridge or something instead?

Unhappily, although showing your movies for your friends’ enjoyment and appreciation should be the climax of all your picture-taking efforts, many amateurs do it in a clumsy, careless fashion. Too much time in setting up, hunting for a suitable screen, false starts, and the interruptions all mar the fruits of the time, effort, and money you have put into your movies.

By consistently following a definite method, much can be done toward making your movie showings pleasant instead of painful. First of all, have a certain specific place where you always show your movies. You are probably not one of the fortunate few who are able to have a special “little theater” in their homes; and you don’t need it. But for ease and facility in getting set up, you should have a definite, known place. Choose for the projector a steady table near an electrical outlet (preferably one which will stay “hot” when the room lights are switched off).

Be sure that the projector cord is long enough to reach the floor outlet or light socket plug. The chances are three-to-one that it will not be, as projector manufacturers are unaccountably reluctant to supply a reasonably long cord with even the most expensive equipment. If it is not, provide an extension cord of

suitable length, and keep it with the projector at all times. By eliminating things to hunt up each time you show your movies, you will get set up faster, and your showings will give a much smoother impression.

Choose a place where the seating facilities in the room will naturally face the screen without too much shifting around of furniture. Find a way of fastening the screen securely in the correct position. And your screen, whether it be home-made or bought at the store, should have a definite existence—not a hypothetical, uncertain existence every time you want to show your movies. A screen hastily improvised at the last moment is almost sure to be unsatisfactory. Get a small beaded screen from your camera dealer's—or, if you prefer, make your own from a sheet of smooth white cardboard (at least 8-ply) 22x30 or 30x40 inches. Bind the edges with cellulose tape.

Of course you should have a definite place for keeping your projector and screen when not in use, so that when you want to show your movies they are easily accessible. Set the projector and screen in their correct places—you will know from previous experimenting where they should be placed so that the picture will fill the screen. Plug in the projector and turn it on (with no film in it). By doing this you are able to check (1) position of projected image, which you will adjust by tilting the projector forward or back, or moving it from side to side; (2) approximate focus; bring the white image on the screen into sharp focus, which will be adjusted slightly later on when the film is projected; (3) condition of lamp; you want to know now if it is burnt out, not discover that when your audience expects to see a picture on the screen; (4) condition of aperture; if any dust shows up along the edges of the frame-line, remove it by brushing it out with an aperture brush or by blowing. With these points checked up, shut off the projector and thread on the film. The film should travel with the image upside down as it comes off the feed reel, and the emulsion (dull) side should be out, facing the lens, if it is an original film. Duplicates (and films printed from a negative) will have the shiny side facing the lens.

When the film is threaded, check everything carefully. It is better to take a few more moments in setting up, than to have a false start and possibly ruin some film. Are the sprocket-holes correctly engaged in the sprockets? Are the loops large enough? Is the take-up reel correctly threaded, and does the belt "take-up"?

If everything seems to be in good order, have someone switch off the room lights (or unscrew light-bulbs, if your projector is on the same circuit). Start the projector, bringing the picture immediately into sharp focus. Adjust the speed so that there is no noticeable flicker. If the film was shot at sound speed (24 frames a second), the projector should be speeded up accordingly to make the action natural.

If the film should slip and move continuously past the gate, so that all you see is a blur on the screen, stop the projector immediately. If the film was correctly threaded, this may have been caused by torn sprocket holes or crooked splices. As you will want to continue with the showing, move the film ahead a foot or so, and re-thread carefully. Later on, however, be sure to check over the film closely to find out what caused the trouble, and remove any torn sprocket holes and repair incorrect splices. It would be well to put a note with the reel if this cannot be taken care of in the same evening, so that the film will not be projected before being checked, with possible further damage.

Such interruptions are, of course, very annoying, and can largely be prevented

by careful splicing and by discarding film that is becoming old and badly torn. Films you want to keep should be duplicated when new, and only the duplicate projected.

As the last of the film goes through the projector, turn off the lamp switch (or the projector switch, if there is no separate lamp switch). Only a careless projectionist will make his audience look at a dazzling white screen at the end of his picture. Switch on the "house lights"—and the showing is completed.

If you can conveniently do so, re-wind the film immediately. In any event, don't put the film away until it has been re-wound and is ready for a future showing.

A word about the films you show. Don't inflict every film you have ever taken—good or bad—upon your friends. At the outset, select the films you think will genuinely interest them, and whatever their enthusiasm, don't go beyond it. People are generally not interested in seeing a lot of people they don't know acting silly in front of the movie camera. If you are a serious amateur, you will, of course, have your films edited and titled to some degree, with all bad scenes removed, before showing them to your friends. The amateur who shows his films just as they came back from processing—a conglomeration of unrelated subjects—good scenes and bad—is a blight to the hobby of movie-making. But showing a few well-integrated reels in a methodical, professional manner will bring you the reward of your friends' enthusiasm and the proud satisfaction of having your films appreciated.

When You Show Sound Movies

Sixteen millimeter sound projectors have come down in price and up in quality to the extent that they almost invariably are the choice of a business house when projection equipment is purchased. Even though the firm does not have a sound film of its own, the sound projector is preferred because of the frequent opportunities for borrowing sound films from other concerns. Also the universal equipping of sound projectors for 1600-foot reels make them highly desirable for showing silent films which run over 400 feet in length. A still further advantage of the sound machine for silent pictures is that with the addition of a microphone and possibly a small phonograph turntable, the operator can give a lecture with accompanying musical score which will do pretty nearly as good a job as the regular synchronized sound on film production.

In operation, sound machines are not much more complicated than silent machines, but it is much more important that they be operated correctly. Sound prints are more expensive to make than are silent ones and damage to them is more serious, for if the film is broken, not only are pictures lost, but the sound track may lose enough to destroy the proper context of the narration. At the same time sound prints are more liable to become damaged in careless handling because they are projected at a higher rate (24 frames per second instead of the usual 16 per second) and they have perforations on one side only. The area of the second row of perforations is given over to the sound track. A little extra care spent during the projection of a sound film is certainly worth while.

Damage to sound-on-film prints usually takes one of two forms. Either the film base and sprocket holes become distorted and torn or the film becomes badly scratched. The first type of damage, the actual destruction of the celluloid is almost invariably caused by improper threading of the projector. The operator threads the film in what he thinks is the correct manner with all loops properly

formed, but fails to check each sprocket to make sure the sprocket teeth are engaged in the sprocket holes. When the machine is started, the film rides the top of the sprocket teeth and becomes "sprocket run." The fact that ninety per cent of the damage of this sort occurs in the first part of reels which have been in service for some time, indicates that improper threading is the primary fault. Destruction of perforations due to just plain wearing out after many showings is very rare. Somebody is almost sure to ruin a print by improper threading before it has a chance to wear out.

Occasionally sound film perforations will be damaged due to excessive pull by the take-up reel. As mentioned above, all sound projectors are equipped for 1600-foot reels and in order to take up this large diameter successfully, the reel must be driven with more force than for a 400-foot reel. Without careful checking of condition of take-up belts and slip clutches, the tension may easily become so great, when using a 400-foot reel as a take-up, that the film becomes torn. Some machines have methods of varying the take-up tension for different sizes of reels and these should be properly adjusted according to the instructions for that machine. It is safest to use a 1600-foot reel always as a take-up even though the film to be run is only 400 feet or less.

The second type of film damage, the scratching of emulsion or celluloid surfaces is particularly annoying. A sound film that has been scratched will run through the projector all right, but "rain" on the screen due to scratches on the picture area certainly destroys much of the film's chance to make a good impression. Scratches on the sound track area are picked up by the sound reproducing mechanism as excessive background noise or hissing and sputtering in the loudspeaker.

Scratching of film can be done by improper threading of the projector when the film loops are made too large so as to scrape against parts of the projector housing. Sometimes also the film is threaded into the projector case from the external reels, between one of the little guide rollers and the rough edge of the hole through the case, instead of being placed between the two guide rollers which are supposed to keep the film from touching the case. Improper handling of film during rewinding operations, in which the film is allowed to scrape over a part of the projector case, will also result in scratches.

Inexcusable is the fact that at least two projectors on the market are so designed that scratching of the film is inevitable no matter how much care is taken! The worst scratches made by these machines occur on the sound track and can only be explained on the basis that the designers of the equipment did not take the trouble to look at the standards of film dimensions put out by the Society of Motion Picture Engineers. Because 16mm sound film has most of its area devoted to either picture or sound track, there is a problem of designing guides which will keep the vital areas clear. The space between picture and sound track, while rather narrow is used for guiding purposes and naturally there will be a scratch or abrasion develop at this point. This does no harm if it is in such a position that it neither is projected on the screen or picked up by the scanning beam of the sound unit. But in the two makes of projectors under criticism, one places this scratch well within the field of its sound scanning light beam and the other puts the scratch so that it always can be seen on the right hand edge of the projected picture! Older models of these same makes had no provision at

all for protecting the sound track from abrasion but dragged the film through shoes identical with those for their silent projectors.

Since film damage is the major problem in handling sound films, those who run sound projectors should be careful to check and double check the threading of the machine. It is well to turn the mechanism over by hand after threading, and inspect the film to make sure no perforations are being torn. Then, when the show has started, be sure and inspect the film as it goes onto the take-up reel by running it gently through the fingers. Any unusual strain or tearing of the perforations can be detected at once by this method. Several times throughout the show, the same check by feeling the film should be made, for a bad splice can throw the film off the sprockets. Do not assume that as long as the picture on the screen is good and the sound clear, that the projector is operating properly. It may be doing enough damage to the film so that the print may never run again.

What Is Your Photographic I. Q.?

Determine your photographic I. Q. with the following test. Read the statements as given below and check the correct answers. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good, 80%; good, 70%; fair to bad, below 70%. Compare your answers with those on page 346.

1. When mixing acid and water the procedure should be which one of the following:

- ☐ Pour the acid on the water
- ☐ Pour the water on the acid
- ☐ Mix the two simultaneously
- ☐ Any one of the above methods is proper

2. Films placed in a developer containing too much sodium carbonate will be:

- ☐ Dense, flat and full of detail
- ☐ Lacking in detail and showing little contrast
- ☐ Thin in high lights and with plenty of detail
- ☐ Great in contrast and density

3. It is a general rule that when a filter is placed on a camera lens the camera must be focused:

- ☐ Before the filter is placed on the lens
- ☐ After the filter is placed on the lens
- ☐ The same as before the filter was placed
- ☐ At not less than ten feet

4. The "camera obscura" is which one of the following:

- ☐ Any obsolete camera
- ☐ One of the latest types of miniature cameras
- ☐ A diminutive type of camera used to "steal" candid "shots"
- ☐ An early development of the present day camera

5. A mathematical formula used in photog-

raphy with relation to lenses is as follows:

$$\text{focal length} \times \text{focal length} \times \text{reciprocal of diameter of circle of confusion}$$

$$f: \text{Value of aperture}$$

The quotient will give you:

- ☐ Maximum shutter speed of a lens
- ☐ Angle of view of a lens
- ☐ Degree of chromatic aberration of a lens
- ☐ Hyperfocal distance of a lens

6. In using a Pola-screen over the lens the exposure, over the normal, must be increased approximately:

- ☐ One time
- ☐ Two times
- ☐ Four times
- ☐ Eight times

7. The flash of the popular No. 20 photoflash lamp is most effective for a duration of about:

- ☐ 1/2 of a second
- ☐ 1/200 of a second
- ☐ 1/500 of a second
- ☐ 1/1000 of a second

8. Check any one of the following items that cannot possibly be used by the pictorialist. Be careful!

- ☐ Stove polish
- ☐ Iodine
- ☐ Table salt
- ☐ Gum arabic

9. The Leica differs from the Contax in which one of the following respects:

- ☐ It has a built-in range finder
- ☐ It uses a different size film
- ☐ It has an exposure counting dial
- ☐ Its focal plane shutter travels in a different direction

10. In the measuring of liquid photographic chemicals, one gill would be equal to:

- ☐ Two ounces
- ☐ Four ounces
- ☐ Six ounces
- ☐ Eight ounces



"Magnolia"

Roi Partridge, Oakland, Calif.

First Award—Advanced Class

■ The charm of this lovely high key subject is beyond our powers of expression. The photography is excellent, but even more important to the success of the picture is the fact that the artist has seen the blossom in a particularly inviting aspect. As a flower develops from a bud to a fully opened blossom it presents an infinite variety of shapes and the relationships of the petals are continually changing. As the photographer observes this development he sees a new composition appear before him with each fresh look. It is up to him to select the most effective moment in this unfolding process for the making of his exposure. Mr. Partridge has done particularly well in that respect. Notice the fine handling of the lighting in this print. The light is sufficiently directed to give nice delicate modeling, but also carefully balanced to keep the shadows soft and luminous so as not to interfere with the high key effect which is desired.

Data: 4 x 5 view with 3¼ x 4¼" back; 7" element Bausch & Lomb Protar; unknown exposure on Agfa Isopan by daylight plus 1 photoflood; developed in D-76; 8 x 10" print on Agfa glossy Brovira, medium, not ferrotyped; in Amidol.

Second Award

Advanced Class



*Axel Bahnsen,
Yellow Springs, Ohio*

The torn hat brim is perhaps unnecessary, and the finger-in-the-mouth gesture is possibly a trifle obvious. A more subtle version of this gesture would sharpen the effect of the picture, particularly for the more sophisticated mind.

Data: 10¼ x 13¼" bromide print.

■ Humor is generally conveyed either by over statement or under statement. Pictorial humor except in the field of the cartoon or caricature, is more often successful when it tends toward under statement. This means that the pictorial elements must be boiled down to their essentials, and that these elements must be handled with careful restraint. The way in which Mr. Bahnsen has presented the dancer in this picture is an excellent example of such treatment. Just enough is shown to convey the idea, and it is well to notice that this permits the attention to be concentrated on the boy. This is as it should be for the boy carries the elements of humor in this case. Elements of restraint are also to be noted in the handling of the boy. The costume is not elaborated to the point of inanity, and the facial expression is not over-done. This last is particularly commendable since both model and photographer most often succumb to the temptation of trying to tell the story through a wild contortion of the face. There are two items in the picture which tend toward over statement.



*M. Arthur Robinson,
Berkeley, Calif.*

falsity of the lighting. Those who are stimulated by light hearted flights of fancy will enjoy the picture and may view it as an interesting experiment in the effects which may be achieved by contradictions in lighting.

Data: Composite; both negatives made with 4 x 5 Speed Graphic; 5½" Kodak Anastigmat lens; landscape 1/50th sec. at F:11 on E. K. Commercial Pan., in M. Q. yellow filter; ducks, 1/295th sec., at F:6.3, on E. K. Panchro-Press, in M. Q.; G filter; 11 x 14" composite print on chloro-bromide, in M. Q.

Third Award

Advanced Class

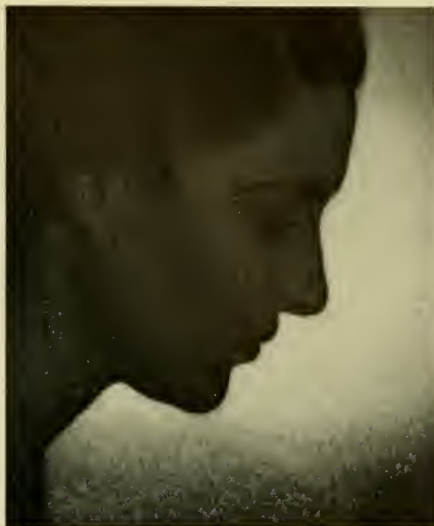
■ The judges were attracted to this picture because they felt it had an other-worldly charm which suggested Fairyland, or perhaps we should say Mother Gooseland in this instance. We must face the fact that in this composite the lighting on the landscape is not the same as the lighting on the geese, and that the depth of focus is greater in the landscape than it is in the geese. We should also realize that it is these incongruities, particularly the lighting, which are principally responsible for the peculiar atmosphere of make believe which the picture undoubtedly has. The hard and fast realist will condemn the

Fourth Award

Advanced Class

■ Perhaps the most difficult problem which confronts the portrait photographer is to devise a lighting and pose that will exactly fit his subject. It seems to us that Mr. Lukins has been unusually successful in that respect. Surely his model has a lovely profile, and there is no doubt that it is presented to maximum advantage in this picture. The profile is nicely placed in the picture space. Notice that a suggestion of modeling, however delicate, is maintained in spite of the extreme flatness of the lighting. The tiny point of eyelash from the farther eye, which breaks the bridge of the nose, should be removed because it is too noticeable on the smooth line of the profile. The patch of dark tone beneath the eye appears to extend too far downward. This gives a heaviness to the eye that is out of keeping with the beautifully refined profile. It probably would not be apparent to the eye at the time of exposure unless a viewing glass were used, but the condition could best be corrected with make-up.

Data: Studio camera; 36 cm. (14.5 inch) Euryplan lens; Agfa Isopan; 10 x 12" print on Agfa Indiatone Royal, gold toned.



*R. H. Lukins,
Chicago, Ill.*

Fifth Award

Advanced Class

■ This picture may be looked upon as an excellent example of the advantages of knowing how to compact and simplify the elements of a story telling picture. A literal minded rather than a pictorial minded photographer might easily have felt it necessary to show the organ grinder, the organ and the monkey all as distinct entities. In such case his picture would be taken from a distance, would probably contain many extraneous elements, and would entirely lack the intimate, revealing quality that constitutes the principal charm of the present picture. By bringing the monkey up on the man's shoulder and by suggesting the organ by means of the strap which supports it Mr. Moore has compacted and simplified the elements of his picture and made it possible to get a close-up, intimate shot which is many times more illuminating and interesting than the literal presentation outlined above. Here we can really see the jolly organ grinder and the comically serious little monkey, which is just another way of saying that the photograph tells its story effectively. The strip of white shirt catches the eye and should have been covered by the bandana.

Data: Leica; 135 mm. Hektor; 1/40th sec. at F:6.3, on Agfa Supreme in personal formula; 11 x 14" print on Agfa Brovira Royal.



*"The Organ Grinder"
Frank Marshall Moore,
Chicago, Ill.*



"Take Me Down"

Cecil Gray, Richmond, Va.

First Award—Amateur Class

■ Half truths are dangerous things and we have come to feel that many an amateur is laboring under such a delusion with respect to his attitude toward subject matter. He has been repeatedly told that "pictures are everywhere if we can only see them." Consequently he has come to believe by implication that subject matter is unimportant. He wouldn't actually say that, but he concentrates so much on how to handle his material that he fails to make an estimate of its intrinsic worth. This picture may serve as an example of the value of strong subject matter. The human interest values are so strong that the picture earns a high place in spite of a rather serious weakness in composition. We of course refer to the triangular shaped bright patch in the lower right which contains an out of focus figure. The figure by itself is distracting and the patch of bright tone with lines converging toward the edge of the print adds to the difficulty. The picture would be improved if the whole area were dodged in to the deep tone seen in the background. This is a practical procedure because the area is bordered by straight lines. The strongest highlights should be crudely etched down on the negative and with the size of the projected image determined, an accurate mask should be cut which will permit light to strike only the area in question. Under such conditions dodging in can be carried as far as desired.

Data: 6 x 6 cm. Rolleiflex; Zeiss Tessar F:3.5; 1/50th sec. at F:8, on E. K. Super XX, in DK-20; 11 x 14" print on Gevaert Gevaluxe, in D-72.

Second Award

Amateur Class

■ We suspect that the material shown here is some sort of a peeled vegetable such as celery or rhubarb. Whatever it may be it presents a most interesting form, with intriguing line and texture, and a strong center of interest at the point where the curving forms converge. It is a difficult problem to control the bright oval formed by the rim of the bowl so that it performs its proper supporting function without becoming too obtrusive. As things are we feel it is just a little too strong. It is not practical to lower the tone value by dodging. A somewhat lighter background might help by reducing contrast, but for best results that would call for a new negative and it would probably be next to impossible to duplicate or improve on this arrangement of material. We would prefer to retain the dark background and trim down from the top so that the bright edge of the rim is eliminated and the dark inner edge of the bowl becomes tangent to the top of the print. To our eye this weakens the oval line of the bowl just enough to make things right. Some will feel that this trimming offers an opportunity for the eye to slip out. So far as the writer can see the eye carries around without difficulty. The highlight in the lower left, on the rim of the underneath pan is an excellent balancing note but it should be reduced in tone.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " R. B. Auto Graflex; Bausch & Lomb Tessar; exposure at F:32 with K-2 filter by daylight; negative developed in DK-20; 11×14 " print on E. K. Kodabrom F-2, in Amidol.



"Curlicues"

Johanna E. Heim,
San Francisco, Calif.

Third Award

Amateur Class

■ These hands are excellently arranged and expertly photographed. Most interesting point for discussion concerns the placing of the hands in the picture space. Mr. Jarvis was wise to avoid an exactly diagonal position for the left arm and hand. Things which run from one corner of the print to the other have an obvious quality that is disturbing and tend to divide the picture into equal halves. As things are however the blank space in the lower left is large enough to suggest emptiness. We think it would help therefore to turn the negative in printing enough so that the hand assumes a more diagonal direction in the picture space thus reducing the amount of open space in the lower left. This should not be carried so far that the hand points to the lower left corner, for the reasons given above. The hands have apparently been treated with oil to bring out the highlights. This is a good trick if used with restraint, but we think it is slightly overdone in this case. Cold cream is best and it should be used very sparingly.

Data: 6×6 cm. Rolleiflex; 1 sec. at F:16 on Agfa Superpan in M. C. M. 100; 2 photofloods; 11×14 " print on E. K. Opal G, Nelson gold toned.



"Mother's Hands"

Geo. E. Jarvis,
Vancouver, Canada



"Dock Portrait"
Don MacLaughlin,
San Francisco, Calif.

posure and a larger image on the negative would appear to be the correctives needed.

Data: 6 x 6 cm. Rolleicord; 1/100th sec. at F:8, on Agfa Finopan in hazy sunlight; 9½ x 13" bromide print.

Fourth Award

Amateur Class

■ This picture is attractive because the figure is shown in a natural and interesting position. In other words it is a successful informal portrait. The net is cleverly used to fill in what would otherwise be weak blank space in the print. It would help, we believe, if there could be a reasonably well defined cloud form in the upper left to perform the same function as does the net for the lower left. Judging from the graininess of the print this must be an enlargement from a small portion of the negative. The picture would be more effective if it were technically better. A bit more exposure and a larger image on the negative would appear to be the correctives needed.



"The Race"
Fred Herrington,
San Francisco, Calif.

Fifth Award

Amateur Class

■ These two boats are nicely placed in the picture space and the repetition of their forms adds an effective element of rhythm to the composition. Principal shortcomings are lack of highlight detail in the sails, and a general lack of good definition throughout. This last is apparently due to slight movement which could be corrected with a faster shutter speed. When one is photographing moving objects from a swaying boat it is best to use a higher shutter speed than appears necessary because in such cases the camera itself can not be held steady so that there is danger of a sort of adding together of the various movements, so that their effect is greater than it would seem to be. Good definition would have brought out the water action in the foreground, and helped in the rendering of highlight detail in the sails, both of which would add a good deal to the picture.

Data: 3¼ x 4¼" Graflex; 6¼" Zeiss Tessar; 1/90th sec. at F:5.6, on E. K. Panatomic in DK-20; 14 x 17" print on Defender Velour Black DL, in D-72; partially gold toned.

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: R. H. Lukins and Frank Marshall Moore, for the Fort Dearborn Camera Club, and Axel Bahnsen, for the Yellow Springs Camera Club.

The following won prizes for their clubs in the Amateur Class: Don MacLaughlin, for the California Camera Club; Cecil Gray, for the Camera Club of Richmond; Fred Herrington, for the E.P.I.C. Pool; Johanna E. Heim, for the Photographic Society of San Francisco, and George E. Jarvis, for the Vancouver Photographic Society.

The following prize winners have no club affiliations: Roi Partridge and M. Arthur Robinson.

Contributing Clubs

Aluminum Camera Club (New Kensington, Pa.)
Bombay Kodak Fellowship (India)
Calgary Photographic Society (Canada)
California Camera Club (San Francisco)
Camera Art Club of Beeville (Texas)
Camera Guild of Cleveland (Ohio)
Camera Club of Richmond (Va.)
Cincinnati Camera Club (Ohio)
Cleveland Photographic Society (Ohio)
Dallas Pictorialists (Texas)
Detroit Camera Club (Mich.)
E.P.I.C. Pool of San Francisco
Florida Camera Club (Tampa, Fla.)
Fort Dearborn Camera Club
Fotoklub Ljubljana (Yugoslavia)
Lahore Camera Club (India)

Lititz Springs Camera Club (Pa.)
Long Island Photo Society (Flushing, N. Y.)
Marin Camera Club (San Anselmo, Calif.)
Midwood Camera Club (Brooklyn, N. Y.)
Niagara Falls Camera Club (N. Y.)
The Pack Rats (Pasadena, Calif.)
Paris Camera Club (Texas)
Photographic Society of San Francisco
Photo Pictorialists of Springfield (Mass.)
Rothschild Camera Clinic (Los Angeles, Calif.)
Santa Barbara Camera Club (Calif.)
Sierra Camera Club (Sacramento, Calif.)
Signa Phi Nothing (Sacramento, Calif.)
Vancouver Photographic Society (Canada)
Yellow Springs Camera Club (Ohio)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	38
Indianapolis Camera Club.....	11
Pictorial Photographers of America.....	6
Miniature Camera Club of Oakland.....	5
Fotoklub Ljubljana	4
Fotoklub Zagreb	3
Los Angeles Camera Club.....	3

Small Clubs Advanced Class

Yellow Springs Camera Club.....	7
The Pack Rats.....	4
The Camera Clique.....	2
Aluminum Camera Club.....	1

Large Clubs Amateur Class

Camera Club of Richmond.....	10
California Camera Club.....	6
Detroit Camera Club.....	4
Miniature Camera Club of Oakland.....	4
Photographic Society of San Francisco.....	4
Cleveland Photographic Society.....	3
Indianapolis Camera Club.....	1
Sierra Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool of San Francisco.....	13
Dallas Pictorialists	12
Signa Phi Nothing.....	5
San Jose Camera Club.....	3
Vancouver Photographic Society.....	3
Florida Camera Club.....	2
Midwood Camera Club.....	1

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired, on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Correspondence*

Competition Comment

Dear Sir:

I am always interested in your monthly competitive prints, though I do not always agree with the criticisms. Frequently so many faults are found that the print has not a leg left to stand on, and then one wonders why the print was reproduced, and why given an award; if these are permissible questions.

In the June issue I find interest in the First Award Advanced Class print, and agree with Mr. Roi Partridge in this and most of his comments. I do think, though, that he has missed the most glaring defect, in that the leaning pole at the right definitely lacks support. It is just hanging there on the edge of the print, apparently defying the laws of gravity.

Mr. Partridge suggested trimming from the right of the print to improve the division of space. The inclusion of the base of the hanging pole would have allowed trimming from the left, at a point where the down-curving strand of wire cuts the horizontal strand above the base of the print. This arrangement would give an improved division of space and strength to the composition. It would give prominence to the larger, more brightly lighted post. The trend of the wires at the right edge is downward, which would be a decided advantage in extending the space on that side.

From his comments, oft repeated, I would judge that Mr. Partridge is definitely an f:64 proponent, and would have all camera workers record with the lens more than the human eye can possibly cover.

Mr. Partridge is entitled to his own opinion in the matter, but to state that Mr. Myron Hexter is not to be forgiven for subduing the more distant penguins in "The Rome-Berlin Axis" on page 285, in order to give prominence to the foremost figure is going rather far. That is dictatorship akin to the situation suggested in the title. Let those who wish, make prints like "Interpretation," on page 286, but let them be tolerant about it, and not state that any other interpretation is wrong, and not to be forgiven. Art would be dull indeed if we all aimed at a similar interpretation, if we strived to create a similar pattern, instead of expressing our artistic feelings in our own individual way.

Please do not think from the foregoing that I do not appreciate your competitive section. I do. It is most interesting for several reasons, but please do not let your talented commentators try to force their own particular practices down our throats, and tell us that nothing else is permissible, and can be forgiven. Those who know will not swallow it, but others may. If copy-book photography became the universal practice the good Camera Craft might go out of

business for lack of something different and interesting to show and discuss, and that would be a calamity. Let us hold to our own ideas and methods of interpretation, but for heaven's sake let us be tolerant of the other fellow's viewpoint, lest he be proved right and ourselves wrong.

H. G. Cox.

New Westminster, Canada.

Weston

Dear Sir:

Edward Weston's articles have been extremely stimulating—not only for the discussions of technical problems but for the understanding interpretation of the whole field of photography. Articles as well written as these—not only in the things they have to say but in the way they say them—almost never appear in photographic magazines. I shall keep the issues which contain Weston's writings as a permanent part of my library, and I hope very much that he will continue to be a regular contributor to Camera Craft.

Yours sincerely,

Virginia Moss Brown.

About Composition

Dear Sir:

While reading Mr. Noble's thought provoking letter in the May issue of Camera Craft I felt very much like writing an answer, but I could not resist when I got to the end, and read your comment—"Composition can also be achieved by waiting for the moment when things arrange themselves." How true that statement is, it is the very foundation upon which I have built my technique in taking animal pictures, although I believe that it also applies to any kind of photography. Having complete control over each step that goes into the making of a picture enables you to be more capable of creating one that is exactly what you want. And this "waiting" is really a means of control.

Good principles of design both should and can be present in any kind of a picture. Depending on what you want to express, you have to determine beforehand what effect will be best suited to the subject in question, and arrange things in advance as much as possible toward that end. After the preliminary but very important details are taken care of (meter reading, camera angle, background, lighting, etc.) if you have the desired composition in mind, and are patient enough, that moment will come when your picture is there, arranged for you, and all that is necessary then is to be alert enough and able to recognize it fast enough so that you can capture it with the camera.

Mr. Noble in speaking of a well built up composition says that "the construction of such a composition would have no part in a living event." I cannot agree with him, for

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

there is unity, design and rhythm in any living event. Depending on the subject matter the moments may be many or few when these qualities are obvious, but it is up to you to recognize and capture them, for in them lies your picture. Design is all around you—the important thing is to see it and then portray it.

Sincerely,
Doris M. Varney.

Television

Dear Sir:

Television is a reality in Los Angeles and many camera fans are having a lot of fun photographing images on teleceivers here. The Hollywood Television Society at 7377 Santa Monica Blvd. is the place to take photographs every Tuesday night. President George Seward and his young geniuses put their sets on display and tune in on our regular 7:30 to 8:30 p.m. programs, sponsored by Thomas S. Lee.

We have been on the air with W6XAO here nearly eight years and now present live talent shows four nights a week. We project film on Saturday and Monday. Sunday we rest.

I enclose an actual photograph which shows the remarkable amount of detail possible to put on a television screen. This picture excels many of those seen recently in most of the national magazines which have carried feature articles on television. Photographers generally have not caught on how to make such pictures because they have not had the opportunities to learn. The secret is this: cover the screen with a black cloth and make a flashlight of the "lookers" and the teleceiver. Then turn off all the room lights, uncover the teleceiver screen and give as long an exposure as movement will permit for the teleceiver screen only.

As a further tip to San Francisco fans, we have made application to the FCC for a



Harry R. Lubcke, Director of Television, phones instructions to the studio while Thomas S. Lee, owner of W6XAO, tunes in the program. Photo by Allen Burg.

television station permit in that city. Polish your lenses, Wm. H. Reiser and the rest of you lively Camera Crafters, there's plenty of good shooting in store.

Sincerely,

Mark Finley
Director of Public Relations
Don Lee Broadcasting System.

Club Notes

Forthcoming Exhibitions

Huguenot Camera Club First Anniversary Salon. Address Huguenot Camera Club, Y.M.C.A., New Rochelle, N. Y. Closing date August 15, 1939. Entry fee \$1.00, limit four prints. Entries accepted from all photographers who are residents of Westchester County.

Seventh International Salon of Pictorial Photography. Address Fotoklub Zagreb, Masarykova 11, Zagreb, Yugoslavia. Closing date August 20, 1939. Entry fee \$1.00, limit 4 prints. October, 1939.

Fifth International Focus-Salon. Address International Focus Salon, Bloemendaal, Holland. Closing date August 25, 1939. Entry fee 2, 5 florins, limit 4 prints. September 30 to October 15, 1939.

500 International Photographic Prize Com-

petition. Address Messrs. Franke and Heidecke, Brunswick, Germany. Contestants living in the United States may send their entries to Burleigh Brooks, Inc., 127 W. 42nd St., New York, N. Y. Closing date August 31, 1939. All owners of a Rolleiflex or Rolleicord camera are eligible.

Second Annual Berkshire National Photographic Exhibition. Address Exhibition Committee, Berkshire Museum Camera Club, The Berkshire Museum, Pittsfield, Mass. Open to any resident in U. S. Closing date July 14th, 1939. Entry fee \$1.00, limit 4 prints. July 26th to August 13th, 1939.

Fourth Annual Salon of the Cedar Rapids Camera Club. Address Robert E. Campbell, Salon Sec., 2622 Country Club Pkwy., S. E., Cedar Rapids, Iowa. Closing date Oct. 1st. Entry fee \$1.00, limit 4 prints. Nov. 5th to Nov. 19th, 1939.

The New York Salon of Photography 1939. Address the Salon Committee, The Camera Club, 121 W. 68th St., New York, N. Y. Closing date October 2nd. Entry fee \$1.00, limit 4 prints. Oct. 29th to Nov. 30th, 1939.

Fourteenth Annual Salon of Photography. Address The Salon Jury, Museum of Fine Arts of Houston, Main & Montrose Blvd., Houston, Texas. Closing date Sept. 23rd. Entry fee \$1.00, limit 4 prints. Oct. 7th to Oct. 29th, 1939.

The Sixth Canadian International Salon of Photographic Art. Address Exhibition Secretary, Canadian International Salon of Photographic Art, National Gallery, Ottawa, Canada. Closing date Sept. 9th. No entry fee. Oct. 20th to Nov. 12th, 1939 and afterwards in other Canadian cities.

XV Salon Internacional de Fotografía, Zaragoza, Spain. Address Secretario de la Sociedad Fotografía de Zaragoza, Plaza De Sas, 7, Zaragoza, Spain. Closing date Sept. 15th. Entry fee \$1.00. October 1939.

The Third Indian International Salon of Photographic Art. Address Mr. N. B. Cooper, A.R.P.S., Honorary Secretary, Camera Pictorialists of Bombay, 243, Hornby Road, Fort, Bombay, India. Closing date Sept. 8th. Entry fee \$1.25, limit 4 prints. November 1939.

The First Annual Atlanta National Photographic Salon. Address C. S. Minglehoff, 252 Peachtree St., Atlanta, Ga. Closing date Sept. 18th. Entry fee \$1.00, limit four prints. Only prints of amateur photographers will be accepted. October 1st to 15th, 1939.

The London Salon of Photography, 1939. Address the Hon. Secretary, The London Salon of Photography, 26-27, Conduit St., New Bond St., London, W. 1, England. Closing date August 30th. Entry fee 5s. Sept. 9th to Oct. 7th, 1939.

The Ice Follies of 1939, now being presented at Winterland, in San Francisco, Calif., are conducting a Candid Camera Contest, beginning June 12th and continuing for four weeks. The contest is open to all amateur photographers and rules and entry blanks may be obtained from local photographic supply houses or from the box office at Winterland. Photographs must be taken from the regular admission seats during a regular performance. \$25.00 in cash prizes and eight pairs of tickets to the Ice Follies will be awarded, as well as additional prizes in photographic merchandise contributed by local photographic supply stores.

Mr. P. Douglas Anderson, F.R.P.S., popular instructor of the University of California Extension Division Photographic Courses, was married to Miss Mary Dunlop, on May 27, 1939. Camera Craft, along with their many friends, wishes the couple many years of happiness.

The First Photographic Tour to Alaska will be conducted by Mr. E. W. Blew, A.R. P.S., famous photographer and instructor, during August of this year. The tour is open to anyone who is seriously interested in photography. The group will leave Los Angeles on August 4th and return to Seattle on August 19th. Field trips will be conducted at all ports of landing and classes in photography will be given en route. A darkroom will be provided on the boat.

Write E. W. Blew, A.R.P.S., 130 N. Greenleaf Ave., Whittier, Calif., for complete details.

The Fort Dearborn Camera Club, of Chicago, Ill., have adopted a new name for their club bulletin, which will now be known as the "Spotting Brush." The club has just had the pleasure of exhibiting a group of prints by Edward Weston. The prints exhibited were selected from photographs made during the decade from 1926 to 1936.

The Washington (D. C.) Camera Club Council is sponsoring a radio program, entitled "Cameras in Action." It is broadcast each Friday at 9:45 P.M. over WRC. Each week's program is sponsored by one of the Council's member clubs.

Group insurance for camera club members' photographic equipment is a practical possibility, we learn from "The Anastigmat," club bulletin of the Telephone Camera Club of Washington, D. C. One of their members consulted a representative of a large insurance company and found that, in groups of ten or more, camera insurance can be obtained at a very nominal rate. Consult your local insurance agents for details on similar plans.

The California Camera Club, of San Francisco, Calif., are planning a cruise on the Bay on July 16th. They have chartered the "Wanderer" and will sail the Bay looking for fun and new picture possibilities. The "Wanderer" will accommodate only thirty, so members should see Jack Cannon immediately for reservations.

The Miniature Camera Club of Philadelphia, Pa., successfully introduced a multiple-jury idea at a recent educational program. In an attempt to give members practical experience in judging prints, three juries of five members each were selected. One jury was made up of experienced judges while the other two consisted of novices. Voting was by secret ballot and no totals were posted until all the votes were in. The results showed that the voting of the novice jurors compared very favorably with that of the experienced men.

"Photolore," bulletin of the Washington Leica Club, of Washington, D. C., announces a new club service that other groups should find well worth adopting. The club has an "Instruction Committee" whose members offer their services to any of the club's novices. Individual instruction of this sort should prove a boon to any club's struggling beginners.

Cash prizes totaling \$1,340 will be awarded this year to amateurs submitting the photographs adjudged best in the contest and salon sponsored by the Chicago & Northwestern Railway. The salon will be in two divisions, one for amateurs and the other for advanced amateurs. Prizes to be awarded in each class are: First, \$250; second, \$100; third, \$50; and 27 honorable mentions of \$10. All prints submitted must have been made in 1939 on a visit, via the Chicago & Northwestern Railway, to any vacation or scenic region served by that road. Any amateur photographer in the United States is eligible to submit not more than six prints. There are no restrictions on the type of pictures that may be sent in. Rules of the salon, application blanks and entry forms may be obtained from any office of the Chicago & Northwestern Railway or by

writing the secretary of the Chicago & Northwestern Ry. Camera club, 400 West Madison Street, Chicago, Illinois. September 25 is the closing date of the salon, but applications must be sent in before that time.

The Birmingham Camera Club, 700 Farley Bldg., Birmingham, Ala., recently completed their First Annual Print Competition. This group holds a series of competitions, culminating in the Annual Competition. Contests are held each month and these winners compete in semi-annual judgments. Winners in the semi-annual competitions compete for yearly honors.

The Miami Valley Camera Club Council held its first meeting in Dayton, Ohio, on May 22, 1939. Representatives of eight clubs attended the first meeting. The objective of this organization is to stimulate interest in photography in all its branches, for both the beginner and the advanced amateur, by scheduling prominent lecturers, salon exhibits and social activities. All correspondence should be addressed to Mr. R. C. Abbott, Secretary, Miami Valley Camera Club Council, P. O. Box 102, Dayton, Ohio.

The Houston Camera Club, of Houston, Texas, offers an interesting method of print judging for clubs whose membership is not too large. The prints are judged by the club at large on a basis of from one to ten points. Each member receives an individual rating which is given to him at the following meeting.

"The Developer," bulletin of the Los Angeles Camera Club, announces that plans

are being drawn for a Southern California Council of Camera Clubs. Those interested should communicate with R. L. Wakefield, President of the Los Angeles Camera Club, 2504 West 7th St., Los Angeles, Calif.

"Take the judge to dinner" seems to be sound advice if we are to believe the story of "Foto News," bulletin of the Gary Works Camera Club, of Gary, Ind. It seems that member Paul Shafer entertained the judge quite royally and then won first prize in the monthly contest. All of which caused members to threaten to pass a law against entertaining judges, at least, until after the competition.

The Lima Camera Club, Y.M.C.A., Lima, Ohio, recently held its sixth annual meeting. The club now has an active membership of forty, meeting the 1st and 3rd Mondays of each month. The group has a Traveling Exhibition and is interested in the exchange of prints with other clubs.

The Oval Table Society, Inc., of New York City, recently elected four new associate members: Nickolas Muray, F.R.P.S.; John V. Hansen, A.L.C.; C. W. Gibbs, A.R.P.S.; and Norris W. Harkness. The Oval Table Society is a non-profit organization devoted to the advancement of the art and science of photography. The organization has sponsored many fine photographic shows, including the exhibitions of the Royal Photographic Society of Great Britain.

The Chicago Camera Club, 137 N. Wabash Ave., Chicago, Ill., will exhibit prints by non-resident members during the month of July.

Notes and Comments

The Free-Lance Photographers Guild, Inc., has moved to new and larger quarters at 219 East 41st St., New York City. The Guild has also increased the scope of their activities until they now have access to the work of more than a thousand photographers and more than four million pictures. At present the Guild is increasing its foreign corps to include sections of South America, Australia, the South Sea Islands and the Malay Peninsula. Originally started as a marketing agency for free-lance photographers, the Guild is now developing plans for picture taking facilities in important centers to execute assignments for advertisers and editors.

Photographic Monuments direct from the factory are offered by the Gross Photo Supply Co., 1501-17 W. Bancroft St., Toledo, Ohio, manufacturers for 32 years. A special set of sample mountings for the amateur will be sent for \$1.00, postpaid, or a descriptive circular will be sent free upon request. Ask for circular B-3.

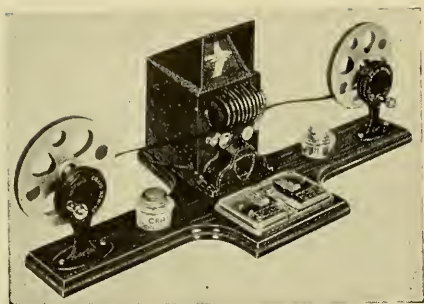
A warning to lens buyers from C. P. Goerz American Opt. Co. Several months ago we asked and received the cooperation of leading photographic magazines in warning the public about spurious GOERZ lenses. Lately we have again received complaints from

persons who were victimized by some unscrupulous individuals disposing of defective and counterfeit GOERZ lenses.

Although, to the casual observer, they resemble GOERZ lenses of recent manufacture, because they have been remounted in modern cells and re-engraved with our trademarks DAGOR or DOGMAR, we were able to identify some as of the old series III, sold about forty years ago, while others were outright frauds, engraved with our identification legend by some crooked individuals. All were optically deficient because the lens members were tampered with by an unskilled person. This lack of performance is what induced the unfortunate owner of the lens to send it to us for a checkup.

To stop this nefarious practice, we now appeal again to those who may have their doubt about the genuineness of any second-hand GOERZ lens they have lately acquired, to send their lens to us for a checkup or at least to send us a full report, stating type, size, engraving, individual number and where they bought the lens.

We pledge our fullest cooperation to obtain restitution for them if we find that the lens has been misbranded and sold under false pretenses. C. P. Goerz American Optical Co., 317 East 34th St., New York City.



8mm. Projecto-Editor

New 8 mm. Craig Projecto-Editor. Acclaimed as the finest movie-aid yet invented, the 8 mm. model of the famous CRAIG PROJECTO-EDITOR is now being shown at leading photographic dealers. If you have not as yet seen its 16 mm. counterpart, it might be explained that this editing device introduces a new principle in animated projection. Due to an unique optical arrangement, which dispenses with mechanical shutters, film may be drawn through fast or slowly while movement on the viewing screen remains **smooth and blurless**. Since the film merely lies in place between highly polished guides, it can be conveniently removed at will for cutting and splicing. The complete outfit includes the Craig Junior Rewind and Splicer combination, mounted on a hardwood base with a bottle of film cement. It lists at \$27.50. Projecto-Editor units may be purchased separately for \$22.50.

The Solar Copy Stand, presented by Burke & James, Inc., 223 W. Madison St., Chicago, Ill., is a valuable accessory for critical copy work, table top photography, macrography, and lens extension tube work. It provides a platform for mounting the subject in perfect focal plane with the camera and a support for the camera that provides accurate adjustment both horizontally and vertically. Price is \$24.50.

The new J-M-P Spot Photometer for enlarging exposures, has been introduced by the J-M-P Mfg. Co., 3027 N. 34th St., Milwaukee, Wis. The new meter is designed on the famous Bunsen photometer principle—the spot fades out. It is small in size, easy to operate and economically priced at \$3.95. Free descriptive literature is available upon request.

All visitors to the New York World's Fair are cordially invited to visit one of the largest photographic schools in the world, the New York Institute of Photography, 10 West 33rd St., New York City. An interesting display of black-and-white and full-color photographs will be exhibited at all times.

Photo Technique, a new photographic magazine, has just been published by McGraw-Hill Publishing Co., 330 W. 32nd St., New York City. Specializing in the technical aspects of the subject, Photo Technique is presented in clean cut, modern format. A few of the many articles in the first issue are: "Exposure for Small Lens-Object Distance," "The Problem of Film Speeds," "Re-

cording Television Images," "Making a Four-Color Print." Subscription price is \$5.00 per year.

Mellowbeam Light Diffusers, introduced by the James H. Smith & Sons Corp., Lake & Colfax Sts., Griffith, Ind., are made from one of the latest developments in the field of science; "Lucite," the new light-carrying material. The new Mellowbeam Diffuser is of particular value in color photography as it will not change the color of the source of light and it provides excellent distribution of light properly diffused. The Mellowbeam will not discolor from heat or age. Complete with facilities for mounting in Victor Reflectors, the Mellowbeam Diffusers range in price from \$1.75 to \$6.00, depending on the size.

The Sae Double-Frame 35mm. Film Viewer, manufactured by SAC, 1600 California St., San Francisco, Calif., offers a simple, easy way to inspect your miniature negatives. The front lens of the viewer may be easily adjusted to fit any vision, with or without the spectacles of the user. Film is quickly inserted and cannot be scratched or damaged by the viewer. Price is \$1.50.

Willoughbys' new Summer Bargain List #639 is now ready for delivery. Write to 110 West 32nd St., New York City, for your free copy.

The Weston Master, a new photoelectric exposure meter, has been introduced by the Weston Electrical Instrument Corp., Newark, N. J., to meet the most critical demands of modern photography. The new Model 715 offers these new important features: extreme sensitivity, for accurate measurements in low light; increased light range; accurate readability; a more selective and highly directional viewing angle; and an increased number of exposure values.

Central Camera Co. has opened a new branch store at 364 No. Michigan Ave., Chicago, Ill. The new branch will be completely modern in every respect and will offer a continuous salon exhibit and an up-to-date projection room for customer use. Mr. Albert L. Green, former assistant manager of the main store, will be in charge of the new branch, and his experience in photographic work makes him well qualified to carry on Central's tradition of service.



Albert L. Green

The demand for the new 84-page catalog, recently issued by Abe Cohen's Exchange, 142 Fulton St., New York City, has forced their mailing department to work overtime. The new catalog is a complete guide to values in all kinds of photographic equipment, both still and movie, and copies will be sent free upon request.



Standard Rolleiflex

The New Standard Rolleiflex has just been announced by Burleigh Brooks, Inc., 127 W. 42nd St., New York City. It is designed to fill a gap in the Rollei line between the Model II Rolleicord, selling at \$77.50, and the Automatic Rolleiflex, priced at \$152.50. The new Standard Rolleiflex has a Zeiss Tessar F:3.5 picture-taking lens and an F:3.1 finder-lens; a Compur Rapid Shutter with speeds up to 1/500th second; and an automatic device that prevents double-exposures and blanks. The new Standard Rolleiflex is priced at \$128.50, including a leather case.

A free leaflet on the use of photographic filters is now being distributed by the Chess-United Co., Emmet Bldg., New York City. With the filter season now in full swing, photographers will find this information of real value.

A folder describing the Albert 4x5 and 5x7 All-Metal Precision Printers will be mailed free upon request to the Albert Specialty Co., 231 So. Green St., Chicago, Ill. These printers, already popular with amateur photographers, are designed and priced to give the maximum of accuracy and efficiency at low cost. The 4x5 size sells for \$9.75 and the 5x7 for \$18.50.

The Tasopé Magazine is a new publication devoted to the advancement of photography and the one-man photo-engraving plant. It is well illustrated and offers many interesting articles of value to the photo-engraver. Free sample copies will be sent upon request to The Tasopé Magazine, Aurora, Mo.

The Bass Cine Bargaingram No. 240 is ready for distribution. A 66-page catalog, covering all that is new in 8mm., 16mm., and 35mm., silent and sound, cine equipment. Write for your free copy of this Bargaingram to the Bass Camera Co., 179 W. Madison St., Chicago, Ill.

San Francisco's newest photographic supply house is the Colortone Productions Co., the Arcade of the Monadnock Bldg., 681 Market St. Offering complete photographic

service in both cine and still photography, the new store is under the direction of Charles Rubalcava and Armand Piaggi. The Colortone Productions Co. is specializing in miniature enlargements, photomurals, and they have sound studio facilities. They are also offering 16mm., sound or silent, colored motion pictures produced to order.

5 x 7" color prints from your Kodachrome transparencies, for only \$2.50, are offered by the Harrington Color Laboratories, P. O. Box 2432, San Francisco, Calif. A scientifically designed laboratory for the production of "wash-off" prints makes this low price possible.

The Dated Slide-O-Mat is a new projection slide introduced by G. Gennert, Inc., 20 West 22nd St., New York City. The slide has a place for recording the dates and names of negatives. It is especially easy to insert the negative in the slide as there is no need for taping, binding or pasting; the negative is placed between the glasses and the frame slides in place and it is ready for projection.

A Deluxe Filter and Holder Combination, a fast and sure method of filter interchangeability is now being offered by Harrison and Harrison, 8351 Santa Monica Blvd., Hollywood, Calif. Their new Dual-Snap Filter Holders permit filters to be inserted or released at the mere snap of a retaining spring. The Holder is similarly readily attached to the camera lens barrel, retaining a



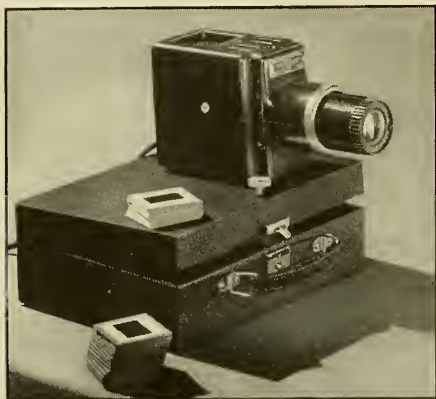
Dual-Snap Filter Holder

firm grip until released. Bright Dural bands now encircle the deluxe line of Harrison filters, to protect them against chipped edges and facilitate handling. This combination of Dual-Snap Holders and Dural Bound Filters is available for all cameras, still and movie. A sunshade is also available to round out this new Harrison "Duraline."

Metal Film is a new development of Dr. Robert W. Carter, of the Taylor-Sloane Corporation, 342 Madison Ave., New York City. After many years of experimenting, the new metal film will be ready for distribution within a short time. The film may be used without any change in standard equipment

and its processing time is shortened in all branches. The film is processed as is regular film. Positive prints made on the metal film are said to be of exceptionally fine quality and, of course, last indefinitely. Metal film can be used to advantage in many different ways such as: outdoor signs, advertising cards and displays, copying important records and books, etc. Those interested can obtain complete details from the above address.

New Kodaslide Projector, Model 1, announced by the Eastman Kodak Co., Rochester, N. Y., offers an efficient, inexpensive, compact unit, priced at only \$18.50. With a 10 foot throw, its Kodak Projection Lens yields a 26 x 38 inch screen picture from a double-frame 35mm. transparency. A slide carrier is not used on the Model 1 Kodaslide



Kodaslide Projector Model 1

as slides are simply fed in through a slot, equipped with light springs that hold correctly in the plane of focus. As each new slide is fed in it pushes the preceding one to the opposite side of the projector for convenient removal.

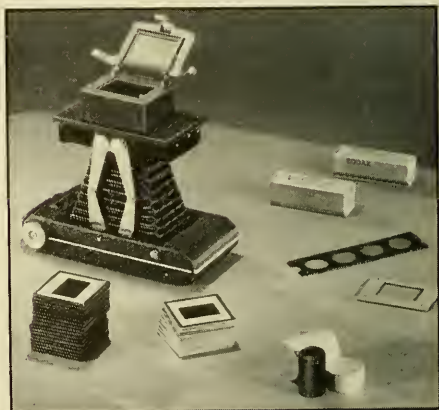
The X-Acto Automatic Mat Cutter, developed by the Crescent Surgical Sales Co., is an ingenious device for bevelling, cutting, scoring, embossing, trimming, etc. It is completely practical and permits anyone to cut mats or trim mounts with unerring accuracy. The X-Acto is laid in position on the mat and accurately set by attached rulers; the knife is placed in the "mechanical wrist" which is slotted at angles of 55 and 90 degrees; the "mechanical wrist" holds the knife at the proper angle and is itself directed along the proper line by a metal guide. A descriptive circular may be obtained from the Raygram Corp., 425 Fourth Ave., New York City.

The Universal Camera Exhibit, sponsored by E. Leitz, Inc., is now traveling in the Central Eastern States, under the direction of Anton F. Baumann. The exhibit will appear in the following cities during the coming month: June 26th-27th, Louisville, Ky.; June 29th-30th, Lexington, Ky.; July 3rd-5th, Dayton, Ohio; July 7th-8th, Columbus, Ohio.



Supermatic Shutter

The new Kodak Supermatic Shutter No. 1, has been announced by the Eastman Kodak Co., of Rochester, N. Y., as an important new-comer in the field of fine precision built shutters. Made in Kodak's precision workshops in Rochester, this new shutter is an unexcelled between-the-lens shutter. The Kodak Supermatic Shutter has a speed range of 1 to 1/400 second, and includes a delayed-action or self-timing setting at all shutter speeds including 1/400 second. At present the Supermatic Shutter is available only in the Kodak Special Six-20 but other Kodaks will be fitted with the shutter at a later date.



Kodak Transparency Enlarger

The new Kodak Transparency Enlarger, introduced by the Eastman Kodak Co., of Rochester, N. Y., permits the photographer to make black-and-white enlarged negatives from his Kodachrome transparencies without using a darkroom. The transparency enlarger is similar in design to the Kodak

16mm. Enlarger, which makes enlargements from home movie frames. The Kodak Transparency Enlarger sells for \$18.50.



The Eastman Color Temperature Meter. introduced by the Eastman Kodak Co., of Rochester, N. Y., evaluates, within reasonable limits, the color temperature of light sources in color photography. Readings are taken simply by turning a single dial until two filters in the meter's viewing field are matched in hue. The color temperature is then read directly from the dial. The Eastman announcement emphasizes that this meter is not intended as a short-cut to quality results in color photography and that it is applicable only to the one factor of obtaining correct color quality in light sources. The Meter is priced at \$27.50.

The New 6 x 6 cm. (2 1/4 x 2 1/4 inches) Exakta, distributed by the Photo Marketing Corp., 10 West 33rd St., New York City, offers in this new size, the fine features found in the Exakta Cameras. It takes 12 pictures on standard 120 rollfilm; is a single lens reflex, with bayonet mounted lenses, instantly interchangeable; ground glass focusing; focal plane shutter, with speeds from 1/1000th to 12 seconds; delayed action shutter; automatic film transport and exposure indicator, etc.

The latest Zeiss Ikon camera is the pocket Tenax I, a trim little instrument not much bigger than an exposure meter, that makes 50 pictures an inch square on 35mm Contax daylight loading spools.

The most unusual feature about the camera, aside from its size, is the lever under the left forefinger. A short throw winds both the film and the shutter, and a touch of the right forefinger takes the picture. Not only does this make for greatest convenience in general photographic work, but, since pictures can be taken at the rate of about one per second without difficulty, it also makes possible rapid series shots of any interesting happening.

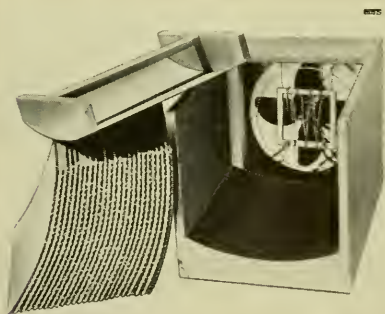
The lens is a Novar f/3.5 of 3.5cm (1 3/8 in.) focal length. This short focal length gives tremendous depth of field. For instance, when focused at 8 feet and stopped down to f/16, the depth of field extends from 4 feet to infinity.

The shutter is the Compur, with speeds from 1 to 1/300th second, and bulb. The Tenax I is fitted with an eye-level optical view finder of large size. A re-winding device is provided for use when other than Contax spools are used, and the camera has an exposure counter. The lever winding device actuates a lock to prevent double exposures and missed frames. Since there is no need to turn the camera for vertical shots, only one tripod socket is provided.

Dimensions of the Tenax I are 1 3/4" x 2 1/2" x 4 1/2"; its weight is 12 ounces, and the price is \$60.00.

Lecture demonstrations in natural color photography are offered to camera clubs within a fifty mile radius of New York City, by the New York Institute of Photography, 10 West 33rd St., New York, N. Y. These lectures are available on Wednesday nights only and the number that can be given is limited so apply early.

A complete new line of Wesco Tripods have been announced by the Western Movie Supply Co., 251 Sutter St., San Francisco, Calif. Combining adaptability and strength with smart appearance at economical prices, the Wesco Tripods are available in six different models, ranging in price from \$5.95 to \$34.50. An illustrated folder is available upon request.



New Print Dryer. A rapid means of drying photo prints is provided by a compact, sturdily-constructed electric drier now available. Prints are placed between chemically-treated, lint-proof blotters so that a forced draft of warm air is blown over them.

The drier, which measures 10" x 10" x 15", will hold twenty-four 8" x 10", or forty-eight 5" x 7", or a larger number of smaller prints, the device dries them completely in thirty to forty minutes. Current consumption is exceptionally low, being less than 400 watts.

The drier carries a six-month's guarantee and sells for \$15. For further information write Moore Products, 5921 Guilford Avenue, Indianapolis, Ind.

Pictures wanted by American Business Magazine. Photographs of modern business offices, well-known executives, modern plants, and new equipment are wanted for publication. \$3.00 to \$10.00 will be paid for 8x10 glossy prints, with suitable factual captions. For complete details write to Eugene Whitmore, Editor, American Business Magazine, 4660 Ravenswood Ave., Chicago, Illinois.

The Baldor Light Booster. a device that increases light from a standard bulb to six times normal volume, has just been introduced by the Baldor Electric Co., 4357 Duncan Ave., St. Louis, Mo. Any number of bulbs may be used up to 800 watts (Photo-Flood lamps cannot be used). The Baldor Light Booster is easily portable and it includes a switch which in the "Off" position permits bulbs to burn at normal intensity when they are being arranged; when the exposure is to be made the switch is turned to "On" and the light is stepped up to six times normal.

Dufaycolor, Inc. 30 Rockefeller Plaza, New York City, announce two new cut films. The new Dufaycolor PF Cut Film for artificial light offers greater speed with artificial light and fidelity of color rendition. Although primarily intended for artificial light, this film is adaptable to outdoor shots by simply using a daylight filter. The Dufaycolor Daylight Type cut film offers greater speed. In open areas in sunlight, exposures of 1/50 of a second at F:8 yield rich, clean transparencies. The new cut films are available in sizes from 2 1/4 x 3 1/4 to 8 x 10 inches.

Cameratrol is a synchronizer and remote control unit for photo-floods lamps, introduced by the Cameratrol Corp., Flemington, N. J. With Cameratrol in place, photo-flood bulbs burn at ordinary brilliance of household lamps during preliminary focusing, etc. Then with the shutter of the camera set on bulb, the operator presses the convenient remote control switch. This opens the shutter and brings the photo-floods to full brilliance at the same time. After the exposure, the lamps drop down to ordinary brilliance again. Cameratrol not only saves the photo-flood lamps but also permits the subject considerably more comfort during the sitting.

The Leitz Film Tank for loading camera magazines completely eliminates the dark-room from this operation. The tank holds a bulk load of 300 feet of 35mm. film and is so constructed that there is no danger of scratching or fogging. Magazines may be loaded by the turning of a conveniently located handle. Complete details may be obtained from E. Leitz, Inc., 730 Fifth Ave., New York City.

The Photographers' Association of America announce that program plans are practically complete for their mammoth convention to be held in Buffalo, N. Y., August 21st to 25th, inclusive. The Association is out to break all records for the fourth time and from the list of exhibitors and splendid program, already arranged, it seems certain they will do so. Details may be obtained from the Executive Manager, Photographers' Association of America, 520 Caxton Bldg., Cleveland, Ohio.

Our Book Shelves

Synchroflash Photography, by Willard D. Morgan. Published by Morgan & Lester, of New York City. 164 pages, 5 1/2 x 8 inches, 200 illustrations, cloth bound. \$1.95.

Without doubt, one of the fastest growing mushrooms in the photographic garden is synchroflash photography. As photographers become increasingly interested in this kind of photography, the manufacturers are continually improving the equipment, until now synchroflash guns can be attached to almost any camera. Thus, with flash bulbs popping in ever increasing numbers, this exhaustive treatise on the subject comes at a very opportune time.

As has been the case with other Morgan & Lester publications, this book is excellently written and presented. It covers its subject completely with detailed explanations of lighting methods; flash bulbs and their characteristics; flash exposure and development; and the methods of installing and operating all synchroflash equipment.

In preparing this book, the author not only contacted many hundreds of photographers personally, to find out what they

wanted to know about synchroflash photography, but also conducted a survey by questionnaire throughout the country, to gain a complete picture of just what information was needed. Needless to say, the manufacturers co-operated with Mr. Morgan in every way to make the book complete in every detail.

Every photographer with a flash gun and those who intend to enter this fascinating field will find this book invaluable.

Press Photography With The Miniature Camera, by Duane Featherstonhaugh. Published by the American Photographic Publishing Co., of Boston, Mass. 160 pages, 5 1/4 x 8 inches, 25 illustrations, cloth bound. \$2.00.

An experienced press photographer explains the methods and practices of his field and how the miniature camera can be adapted to this kind of photography.

Details are given on the equipment necessary, the technical methods of press work, the kind of pictures that will sell, how to sell them, and many other important considerations.

This book will prove a very helpful guide to every free-lance photographer, as well as, to anyone who is considering press photography as a profession.

The Miniature Camera In Professional Hands, by Remie Lohse. Published by The Studio Publications of New York City and London, England. 120 pages, 6x9 inches, 48 full-page plates, spiral binding. \$1.50.

Probably, more than any other photographer, Remie Lohse has been responsible for the "candid" type of photograph. His famous pictures of New York burlesque shows and night clubs were featured in many of America's most popular magazines.

Since the time those pictures appeared, Mr. Lohse has had many pictures of different kinds printed in many magazines and his work has been used in dozens of advertising campaigns. His work covers an extremely wide range but does have one distinguishing characteristic, a real feeling of life and vitality.

In a fourteen-page introduction, the author presents his methods of working, offering many hints of great value to the free-lance photographer.

The feature of the book is the 48 full-page plates. These have been carefully chosen to give a representative picture of Mr. Lohse's greatly varied assignments. Complete technical details are given for each picture, as well as a brief discussion of the special circumstances involved in taking the picture.

Make Your Own Movies For Fun & Profit, by Arthur Gale and King Pessels. Published by Coward-McCann, Inc., of New York City. 230 pages, 6x9 inches, many illustrations, cloth bound. \$3.50.

Certainly no one should know the needs and problems of the cinefan better than a man who edits one of their leading magazines. Such a man is Arthur L. Gale, seven years Editor of "Movie Makers," and one of the authors of this book. Mr. Gale's years of experience with the magazine and with cinematography are clearly shown in this informative, well written volume.

The book tells how to handle a movie camera, how to splice and edit, how to use filters, how to use lights and reflectors, how to use extra lenses, how to prepare titles, how to write a scenario, how to make the most of color photography and how to take care of many other problems that confront the amateur movie maker.

This book will give the novice cinefan a sound basis on which to make his first movies and it offers the more experienced worker ideas and methods by which he can increase the quality of his pictures.

The New Photo-School, by Hans Windisch. Published by Dr. Heering, of Harzburg, Germany. American Agents, Burleigh Brooks, Inc., of New York City. 254 pages, 5½x8 inches, many illustrations, cloth bound. \$3.00.

Photographic authors have made many attempts to present a simplification of the photographic process. Some of these books have been wholly or partially successful, as was that fine publication "The Fun of Photography" by Mario and Mabel Scacheri. However, it seems safe to say that no author

has been more successful in attaining this end than Mr. Windisch.

A quick glance at this book shows the thought and care that have gone into its writing and presentation. There are no "gushy" passages and no wandering explanations. The material must have been boiled down and reworked again and again to arrive at concise, outline form in which the information is presented. We are not exaggerating when we say outline form, for besides the brief, meaty wording, explanatory paragraph headings are used and important points are emphasized by printing them in color.

The book is printed in six colors and many different type faces are used to increase the readability and emphasize special sections. The use of illustrations, of which a great many are in color, is also exceptional and they are tied into the text to make the explanations easy to understand and of lasting impression.

We wish there were more space in which to discuss this fine book but as this is not the case, we can only recommend it heartily as a veritable encyclopedia of photography, brilliantly presented.

Faces & Figures, edited by C. C. Holme. Published by the Studio Publications, Inc., of New York City and London, England. 130 pages, 8x11 inches, 112 full-page plates, cloth bound. \$3.00.

A very interesting collection of photographs by many famous photographers. As indicated by the title, the pictures are of men, women and children, with the emphasis on portraits. The pictures are beautifully reproduced and a study of the 112 plates would prove valuable to any photographer, particularly if he were interested in portraiture.

How To Take Pictures At Night, by M. U. Wallach. Published by Knight Publishers, Inc., of New York City. 64 pages, 6½ x 8 inches, 56 illustrations, spiral binding. 75c.

This comprehensive little book explains clearly the things you want to know about making pictures at night—what to shoot, the films to use, exposures to give, developing and printing. The vague generalities which characterize most books on photography will not confuse you here; exact instructions are given for lighting, exposure and equipment to use.

In addition to technical advice, Mr. Wallach has included a vast amount of camera etiquette—how to obtain permission for theatre photography, what subjects are in good taste and which are taboo.

The wide range of subjects used for illustration and the excellence of the unposed shots demonstrate Mr. Wallach's mastery of the technique of night photography.

Harry Champlin.

Trick Photography, by Edwin T. Hamilton. Published by Dodd, Mead & Co., of New York City. 140 pages, 6 x 9 inches, price \$2.50, cloth bound.

This book deals with simple trick photography with an inexpensive box camera. Each trick is carefully explained in easily understood terms and is also completely diagrammed so that the complete set-up may be easily visualized. A full-page illustration is

also given showing each trick when completed.

A fine book for a boy or girl interested in photography, who will find the simple devices explained fascinating. All the illustrations are made of children of about the age of those who would find the greatest interest in placing their friends and playmates in the funny and unusual predicaments shown.

Ideas for Short Films, by Alex Strasser. Published by Link House Publications, Ltd., of London, England. 80 pages, 4¾ x 7¼ inches, paper bound, price \$1.00.

This is the fourth book in the Amateur Cine World Series and it maintains the fine standard set by the other volumes in this group. Dealing with simple scripts for the amateur, the author emphasizes the importance of this type of film for amateur production. Without the characters and equipment necessary to producing a long film, that will maintain interest, the amateur should concentrate on short subjects, such as Mr. Strasser outlines. He gives many examples of various types of short films and also describes exactly the procedure in preparing scripts and planning a film. Every cine fan will find this book a real aid in improving his pictures.

Miniature Camera Guide. Reference and Record Pocket Book, by William Alexander. Published by The Fountain Press, of London, England. American agents, American Photographic Publishing Co., of Boston, Mass. 148 pages, 3½ x 7 inches, cloth bound, price \$1.00.

The second, revised and enlarged, edition of this handy pocket-sized booklet for minicams. The material on equipment has been brought up-to-date as have the numerous tables that are arranged for quick, easy reference. The other section of the book contains pages for recording all necessary information on exposures, as well as details on developing, printing and enlarging. The especially designed pocket size makes this booklet unusually useful.

A Catalogue of the Epstean Collection on the History and Science of Photography, by the Columbia University Library. Published by The Columbia University Press, New York. 110 pages, 6 x 9½ inches, boards, price \$1.50.

This catalogue of the Epstean Collection of books, pamphlets, and periodicals on photography is presented to make known to students of the subject the contents of one of the greatest collections of this kind ever assembled. As no comprehensive bibliography of the subject exists at present, this catalogue will be invaluable to the student or researcher in photography.

Brighter Photography, by David Charles. Published by Hiffe & Sons, Ltd., of London, England. 143 pages, 4¾ x 7¼ inches, 160 illustrations, cloth bound, \$1.00.

An excellent book for the beginner in photography that covers the subject from the selection of the camera to the finished picture. The illustrations, of which there are 160, are of particular importance. Each explains a particular point in the art of making better photographs, and this effective use of illustrations makes each point

doubly clear. The author's ability to simplify the problems of photography make this volume invaluable to the beginner, as well as a source of helpful information to those more advanced in photography.

Masterpieces of Photography from the Permanent Collection of the Royal Photographic Society. Published by the Pictorial Group of the Royal Photographic Society. 7¼ x 9½ inches, cloth bound.

Fifty-six photogravure reproductions from the Permanent Collection of the Royal Photographic Society. The pictures are presented in roughly chronological order from the time of David O. Hill to the present day. Each artist is limited to one print and the collection is one of unusual beauty. The book also includes a foreword by J. Dudley Johnston.

Answers to What Is Your Photographic I. Q.

1. Acid should always be slowly poured on the water. This is a very important rule to remember and is one of the first taught in every chemistry class.

2. Sodium carbonate, known as an accelerator, if used too freely in a developer will give negatives that are dense, flat and full of detail together with being foggy and granular.

3. The general rule is to focus a camera after the filter has been placed on the lens. Some filters, particularly if of glass, may change the focus to a small degree; consequently the camera should be refocused after the filter is placed.

4. The "camera obscura" is an early development of the present day camera. It is nothing more than a boxlike affair with a simple lens; the image is reflected to a ground glass on top of the "camera" which is covered with an adjustable hood.

5. The formula as given will determine the hyperfocal distance of a lens. Remember that the aperture in use must be substituted in the formula.

6. The exposure increase required with the Pola-screen at the lens only, is four times.

7. The flash of a No. 20 bulb is most effective for a period of about 1/200th of a second. It is also interesting to note that there is an interval of about 1/100th of a second which occurs in the firing period before any light appears.

8. Deduct ten points from your score if you checked any one of these items as being incorrect. Remember that you were warned to be careful! Stove polish is often used by the paper negative maker for print control; iodine is used in one formula as a reducer; table salt is utilized in another formula as a stain remover; gum arabic is employed by control workers making gum prints.

9. The Leica among other respects differs from the Contax inasmuch as its focal plane shutter travels the long length of the picture; in the Contax the shutter travels the short length of the picture. Both have their respective advantages.

10. Four ounces is equal to one gill; in turn four gills is equal to one pint.

CAMERA CRAFT



"Summer"

New York Press Photographers Association Annual Exhibit

Acme

1939

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ING OUTDOOR PORTRAITS II . William Mortensen

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"Sunday, San Juan Capistrano"

William Mortensen

Lighting The Outdoor Portrait

William Mortensen

Part II

IN LAST month's article we saw that, for the purposes of the outdoor portrait, daylight could be divided into five general classes. Briefly outlined, these are:

1. Type A. A light of extreme flatness, showing no cast shadow and practically no modelling, but revealing in full all differences in local tone.

2. Type B. A light with more "punch" than Type A, so that subtleties of modelling are indicated. Its direction is from the front, however, so that no cast shadows are in evidence. There is still ample rendering of local tone.

3. Type C. By arranging the subject in a Type B light so that the soft illumination comes from the side, we secure a lighting of Type C. Shadows are clearly suggested, but owing to the diffusion of the source, they are quite luminous.

4. Type D. Light that is strongly directional, with little diffusion. Use of reflecting elements prevents shadows from becoming opaque. Stress is on the *texture* of the material rather than its local tones.

5. Type E. Extreme contrast of lighting. Dense shadows with no luminosity. Violent emphasis on protuberances and textures.

Types B, C and D are the ones most apt to be useful to the average worker. For convenience in remembering this classification, it may be worth noting that—among the studio illuminations described in *Pictorial Lighting*



Figure 1.
Type A

—Type B corresponds roughly to the *Basic Light* and Type D to the *Dynamic Light*.

These five types differ widely in their pictorial qualities. I wish in this article to discuss the proper application of all five types. Different qualities of light imply different sorts of subject matter.

Use of Type A.

A flat “dead” light, such as Type A, is very critical of the material that is displayed under it. There is no punch or excitement in the light itself, and there is little display of gradation through modelling. It is necessary, therefore, to select material for the Type A light that has pictorial interest apart from its modelling and plastic qualities. This interest may be supplied by arresting arrangements of *local tone* or by attractive *contour*.

In Figure 1, for example, despite the flatness of the light, interest is supplied by the contrasting tonal elements of dark hair and pale flesh, by the arrangement of the figure and by the pattern of stains on the old adobe wall. In a more brilliant light these rather contrasty tonal elements would no doubt prove jumpy and confusing, but under the given conditions they serve to supply the excitement which is lacking in the light itself.

In Figure 2 we have another instance of a justifiable use of the Type A light. Although the amount of modelling and gradation on the face is slight,



Figure 2. Type A

pictorial interest is supplied by the contrasting tones of hair and flesh and by the fine contour of the profile.

If you are confronted with a light of Type A characteristics, you are quite limited as to subject matter. In general, try to observe the following admonitions:

1. Select subject matter distinguished by rather emphatic tonal pattern or striking contour rather than by modelling or texture.
2. Choose a feminine rather than a male subject.
3. Choose a brunette rather than a blond model.
4. Pay especial attention to costume interest.
5. Choose a full figure rather than a head.
6. With a head, favor a profile rather than a full face angle.

It will be useful to note the conditions that produced the Type A lighting in Figures 1 and 2. Figure 1 was taken on a grey day, the diffuse overhead light being further softened by the overhanging cloister and stuccoed walls of the patio. Figure 2 was taken rather late in the afternoon of a heavily overcast day, when the light was so completely diffused that the illumination was almost equal from all quarters of the sky.

Use of Type B.

With a light of Type B, approximating the quality of the "Basic Light," we are subject to much less severe limitation of subject matter than with Type A. More nearly than any other, Type B represents the "universal light." It is a *revealing* light rather than an *expressive* light: subtle modelling and local tone alike are shown to the full.* Since it is frontal illumination, there is no distraction by cast shadows. The subject matter, under a Type B light, must stand on its own merits. For best results, it is essential that this subject matter be of intrinsically high quality.

Figure 3 is representative of material well adapted to the use of the Type B light—not too contrasty in local tone, and delicate rather than bold in modelling. A finely contoured profile, such as that shown in Figure 2, also lends itself to the Type B light.

With a light of Type B characteristics, certain restrictions must be observed in its use. It will give a full complete rendering of any sort of subject matter, but it is, of course, most effective if used appropriately.

1. Avoid conspicuous tonal contrast in subject matter. Blond subjects and those of medium coloring are better rendered than are extreme brunette types.

2. Choose subjects in which the modelling is delicate rather than powerful. A strongly modelled head such as Figure 6 would be weakened under a Type B light.

3. Generally speaking, the Type B light is feminine rather than masculine in its suggestion.

4. The connotation of this light is repose rather than action. Avoid, therefore, too much action or animation with the Type B light.

*Provided, of course, that exposure and development are properly calibrated to the light-area of the subject. See Pictorial Lighting, Chapter Four, and Projection Control, Chapter Three.



Figure 3. Type B



Figure 4. Type C

Figure 3, which we have chosen as representative of Type B lighting, was taken on a late summer afternoon with a sky veiled by a light high fog. Although diffused, the light still had plenty of vitality and clearly defined direction. The photographer stood with his back toward the brightest part of the sky.

Use of Type C.

The same physical conditions—low sun and overcast sky—that produce the Type B light, also yield Type C. For the latter, the relative position of photographer and subject are so altered that the principal illumination comes from the side instead of from behind the photographer.

This side illumination produces soft cast shadows that are completely transparent (Figure 4). The strong overhead light from a thinly overcast sky at midday also produces a Type C illumination, but with downward cast shadows.

The general feeling of Type C is very similar to that of Type B. It has a slightly more dynamic quality, however, owing to increased emphasis on modelling and texture. Type C, therefore, permits of some degree of animation and suggested action. It is also appropriate for masculine subjects, particularly if they are not too rough-hewn.

The conditions and location for Figure 4 were identical with Figure 3 except for a slight alteration in position to secure the side illumination.

Use of Type D.

The unbalanced, frequently spectacular quality of the Type D light

necessitates much care in its use. It is perhaps the commonest type of outdoor light, but it is by no means the easiest to handle. It requires the use of additional appurtenances in the way of reflectors and clever resourcefulness in taking advantage of natural reflecting elements, as well as properly selected subject matter and skill in arranging it.

Figure 5 shows a fairly characteristic example of Type D light—strong cast shadows relieved by reflection, rather powerfully modelled subject matter, dramatically presented.

D stands for "Dynamic," and this term best describes the qualities of the Type D light. It suggests movement, animation, power. It is opposed to delicacy, softness, passivity. These considerations will guide us in our selection of appropriate subject matter for the Type D light.

1. Choose subject matter that is best revealed in terms of its textures and its larger plastic elements.

2. Avoid subject matter that is soft and subtle in its modelling.

3. Avoid subject matter that depends for its effect on its pattern of local tones.

4. Type D lighting will generally favor the masculine rather than the feminine subject.

5. Feminine subject matter, if used, should be presented as an active rather than a passive thing.

Type D lighting is much less flexible and adaptable in practice than is Type B. Once the relative position of the subject and camera is established in a Type B light, the lighting is equally good for all possible angles and adjustments of the subject. But with a Type D set-up, the angle of the subject's head must be carefully adjusted to the angle of the light in order to avoid awkward cast shadows. Probably only one or two variants of a given set-up will prove at all acceptable.

A word as to the conditions of shooting Figure 5: the time was late afternoon with a nearly clear sky. Reflected light necessary to soften the strong cast shadows was secured by a large white cloth, held just to the right of the model. The white drapery of the costume furnished another reflecting element.

Use of Type E.

Of all the five general types of outdoor light, Type E is at the same time the most difficult to use properly and the most limited in its application. It is seldom indeed that one finds material that is impressive enough in its gross plastic elements to justify disregard of the essentially photographic quality of *gradation*. Type E, or something like it, frequently appears in the work of amateurs, but is almost never justifiably employed. Not only must the subject matter be of unusual quality to admit of the stylized sculptural treatment characteristic of Type E light, but it must be arranged with extreme care and adjusted to the meticulously correct angle.

Only such subject matter as that shown in Figure 6—rough, primitive, with exaggerated plastic qualities—is adapted to the Type E light. Without a model of these qualifications, you will produce only a "butchery by light."^{*}

^{*}The Model: page 49.



Figure 5. Type D



Figure 6. Type E

Figure 6 was taken in late afternoon under a very bright sun. No reflector was used.

Effect of Filters.

In outdoor portraiture we meet a condition that has no counterpart in the studio. This is the *color of the background* and its relationship to the color of the subject.

In the studio, the background is usually white—more rarely gray or black. In any case, relationships in tone between the light-area of the subject and the background are secured by adjustments of the relative illumination.* The tonal relationship of the background is, in studio lighting, a very essential part of the effect of the various types of illumination.

A different and more difficult background problem confronts the maker of outdoor portraits. In the first place, the illumination of the background is not subject to control; second, the background is nearly always colored—usually with either the blue of the sky or the green of foliage.

The use of filters, however, takes advantage of the color of the background in order to control tone relationships.

Lightings of the more dynamic types—C, D and E—are more effective against a rather dark background. Even with panchromatic film (which should always be used in outdoor portraiture), blue skies are apt to register unduly light. Under these conditions, there is often poor separa-

*See Pictorial Lighting.



*Figure 7. Type C
with K-2 filter.*



*Figure 8. Type D
with G filter.*

tion between flesh tone and sky tone. The use of a yellow filter will hold back the extremely actinic light of the sky and secure a better relationship of tones.

In practice, not more than two filters will be needed—a K2 filter for slight darkening of the sky and a “G” filter for “over-correction” and more pronounced deepening of the sky tone.

Used with a Type C light, a K2 filter, by darkening the background, changes the apparent quality of the light from Modified Basic to Plastic.* Compare Figure 4 with Figure 7. The set-up for the two pictures was identical, except that a K2 filter was used with Figure 7. Note that in Figure 7, owing to the slight darkening of the sky, the background is of a tone darker than the light-area of the face and lighter than the shadow area—which is the characteristic quality of the Plastic Light. Note further that, owing to the use of the filter, there is, in Figure 7, better separation between the tones of the sky and flesh and also increased luminosity in the shadows.

Figure 8 was made with set-up similar to that of Figure 5, except that a “G” filter was used. By this means the bright blue sky was made quite dark, thus increasing the dramatic effect of the Type D light. A Type D light with an “over-corrected” sky closely approximates the effect of the “Dynamic Light.” *

* Pictorial Lighting: page 66 and page 112.

* Pictorial Lighting: Chapter Six.

Moholy-Nagy, Iconoclast

Al and DeVera Bernsohn

WE MET Moholy-Nagy. And the barriers, that formerly indicated to us the limitations of photography, tumbled—to be supplanted by new, flexible boundaries, farther apart. Photography broadened, widened, deepened.

For Mr. L. Moholy-Nagy, author of the book, "The New Vision," leader of thousands of young designers, photographic illustrator, architect, designer of furniture, typography and periodical forms, and molder of minds, is a photographic iconoclast.

He has taught students—first at the original Bauhaus in post-war Germany, later in other European countries, finally at his newly opened School of Design in Chicago—to approach photography from a fresh, new viewpoint.

His method is similar to that of some instructors in musical composition. The instructor hums a few bars, breaking off sharply in the midst of one. Every student, consciously or otherwise, finishes the melody in his own way.

That's how we happen to find one student experimenting with projecting various flower petals, leaves, peels, and other unusual materials onto paper from an enlarger and getting striking patterns for photogram work and backgrounds. That's how another student happened to bring up a possibility of transmitting light into the enlarger without generating heat in the lamphouse by the use of some of the new plastics with high powers of light transmission. That's how a third student manages to bring forth brilliant results by projecting an image of a three-dimensional object onto sensitized paper by use of a mirror.



Figure 1. A study in texture. Tree bark, rock, clay, fumed wood, glass, carpeting, and other substances having various textures are studied both in natural form and from photographic reproductions so that the student is better capable of combining a sense of visual texture with his photography.

These are just a few of the various experiments hit upon by students who were shown the field of photography and permitted to follow their own directional course.

"Any sincere amateur can contribute something of value to photography and develop a type of photograph that is peculiarly his own if he'll just forget the beaten path, quit imitating others, and give his own interests and his own personality free rein," Mr. Moholy says.

After a discussion with Mr. Moholy and some of his students, you can't help feel that much potentially great work is stifled because innate creators are afraid of being considered absurd.

Can you conceive of taking a photograph without a camera, or with the lens out of the camera? Can motion create photographic volume? Must a print come only from a negative? Once your interest in a new approach to photography has been awakened, prepare to achieve unexpected results. Ideas are never prone to follow a narrow path.

The teachings and practice of Moholy-Nagy seek only to give the student sufficient background and awaken his creative interest enough for him to develop his own course and follow it to a worth-while end. If the amateur or professional photographer is sufficiently interested in his hobby or profession to wish to contribute something to its advancement, he can undoubtedly profit from the method Moholy uses to stimulate his students.

In the first place, he persuades them to forget any misconception they might have had that photography starts and ends with the camera. This is



Figure 2. A light modulator. The student tears, cuts, bends, and folds ordinary white paper, studying it under the light from a single source in order that he can better study the various degrees of gray formed by holding the material being photographed at various angles to the light and to master the range of gray tones possible with a many-planed subject.

to free them from imaginary bounds, not to rid them of the idea of the importance of the camera. It was Moholy who, years ago, predicted the present rise of the camera in number and social importance when he stated that the illiterate of the future will be the person who does not know how to handle a camera.

The course the students follow peculiarly fits them for their backgrounds as workers with photography. In their different classes they learn to approach the subject from its various aspects, aspects which the interested amateur can easily seek for himself. Eye-training is all-important in photography as in many other fields. This, basically, consists of learning to recognize interesting patterns, disturbing combinations of light and shade, emotional effects of certain lines and types of subject matter.

A study of texture is equally important. Every type of material the student sees is associated with his sense of touch; each type of material they touch strikes the eye as having a certain texture. This is important in measuring the degree of "catch" light necessary to achieve the desired effect. to keep, for example, felt from photographing with a texture similar to granite.

Volume must be sensed before a photographer is worth serious consideration. This is taught the student by permitting him to work with clay, wood and other solid materials and studying the effect. So-called

"virtual" volume is next studied, such as when the size of an object is doubled by use of a mirror or when a spinning object is traveling with sufficient speed to be given, by the eye or by an equally slow camera, the entire volume included in its periphery.

Once he has these and similarly essential conceptions, the student begins his training in photography. His first materials: printing-out paper and hypo.

Various objects are laid on the surface of the printing-out paper. A cog from an old alarm clock. A helical spring. A curly, thin wood shaving. String in different patterns. What might well have been the contents of a small boy's pockets. The process of light, dark and intermediate tones is watched through these elementary steps and the photographic processes have begun without the aid of a camera!

In a darkroom, with more sensitive printing paper and a readily controlled enlarger, the process is repeated with more subtlety as the student learns the real key to photography and grasps his, possibly, initial conception of photographic light and shade.

The next step is a "light modulator." The construction of one would be well worth while for the photographer seeking something new in subject matter, to capture the major part of the gray scale, or unusual table-top material. An ordinary sheet of white paper and a single light source are all the material absolutely necessary.

Curve the paper in different directions. Notice the play of light on it. Watch it through the camera finder. Bend a corner of the paper sharply. Interesting, the way those two planes are contrasted by the light, isn't it? Perforate the paper. Make semi-circular or angular incisions and bend these portions away from the major surface of the sheet. Wierd and striking patterns can be formed with the modulator, a valuable exercise for those who wish to more fully appreciate the coordination of light and subject matter.

Probably the most striking phase of the new approach taught at the School of Design is the unusual, but perfectly logical, conception of light. Nathan Lerner, a brilliant scholar in the school, explained his interpretation of light to us: "Usually light was not considered as plastic means, only as an auxiliary medium to indicate material existence. Now a new period starts wherein light will be used as a genuine means of expression because of its own qualities, own characteristics. The photographic experiments reveal the fluid plasticity of light, its ability to radiate, pass, infiltrate, encircle. Also they reveal that through these actions light is able to create negative patterns, lightless volumes which may be, in time to come, as important as its universally appreciated opposite—the light reflection."

Lerner further explained that we are usually aware of light only as it reflects from objects with which we are familiar in patterns to which we have been long accustomed. We can't see it in air unless that air is laden with particles such as dust or smoke. So we make the mistake of not giving proper credit to light as having a nature of its own, and a nature that can be photographed.

He explained one experiment. A hollow cube of glass was filled with smoke and sealed. Through a checkerboard pattern of alternating opaque

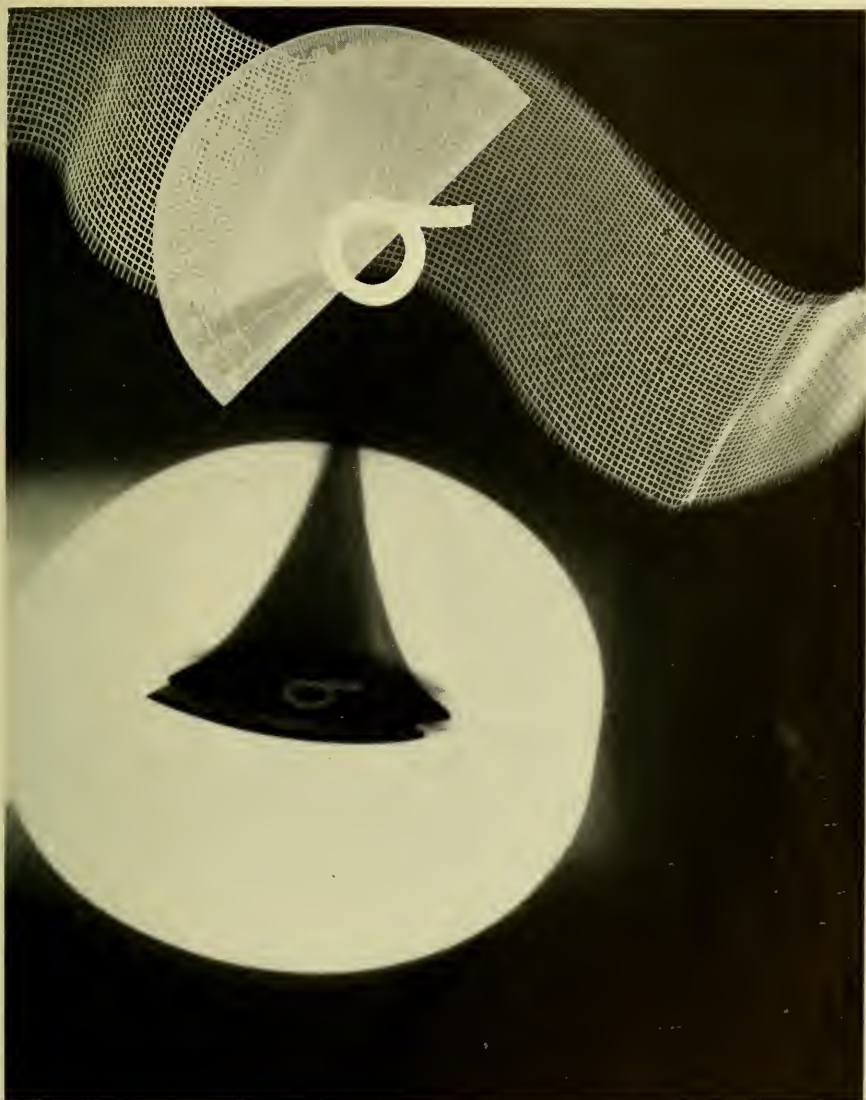


Figure 3. In this manner you can often obtain designs of surprising beauty. This print was a simple experiment with a protractor, ordinary gauze bandage, a lens askew and a circle of paper. Worth imitating, isn't it?

and transparent squares light was directed against one side of the cube, which was otherwise in total darkness. The effect was of a series of bars of light and bars of darkness which might easily have been photographed. These bars were apparently solid. In a cross-direction a similar pattern was projected through the cube. Now cubes of darkness were formed, cubes of a single volume of light, and cubes of a double volume where two projections from transparent squares met: a pattern in light and shade formed without the use of solid reflecting matter!

But what good is it?

Basically, it's just an experiment to show the relativity of photogenic objects, a means of developing the student's conception and of proving that the experimenter understood the idea.

Practically, photograms, photographs, reflectograms and any combinations of these are dependent on this principle of comparative reflecting power. It's an essential of photography with which all too few amateurs have experimented. Now, carrying a possible practical application still farther, can't you conceive of use of this experiment in stage, motion picture or television work? For example, a character in the play visualizes his old southern mansion. White pillars are *projected* into the smoky air of the stage instead of built and dimly lit. The character can even walk through them to give them a strange tone of unreality. The television play is set in heaven. We see eerie pearly gates *projected* onto a scene. A real money saver!

But this practical application isn't sought in the beginning of the work at the School of Design. There's plenty of time for that later. First the student is encouraged to play and experiment with his mediums until he becomes perfectly familiar with them. In this manner he is more liable to discover something entirely new because he is free from obligation to transmit these works of his into the shape of some tangible every-day object which he might otherwise be imitating.

Following the exercises with light, the light modulator and printing-out paper and along with constant training of the senses of volume, texture and light patterns, the students study advanced photographic principles including superimposed images, multiple exposures, negative prints and principles of solarization. After they have become perfectly familiar with the still, black-and-white camera work, they advance to motion picture photography and color photograms.

Chromium furniture and plywood furniture, a couple of world-wide newly-arisen commercial fields, received their birthrights in the schools that were predecessors to the School of Design. Similarly, in photography, we find Moholy-Nagy the foremost exponent of photograms in the world.

He achieves effects of almost metaphysical power with his photograms. The commercial product is shown fitted into a diagram of the instrument with which it is to be used. The dream is captured in a photographic print. Photograms by Moholy have been reproduced throughout the world showing abstractions and tangibilities combined to produce interesting, stirring and often otherwise unattainable results. Simple photograms can easily be made by any amateur. They consist merely of a combination print including



Figure 4. More difficult to understand is the new conception of light. Light and dark areas are purely a matter of relativity. This shows four different interceptions of a flat light and the manner in which the light is changed and patterned by each interception.

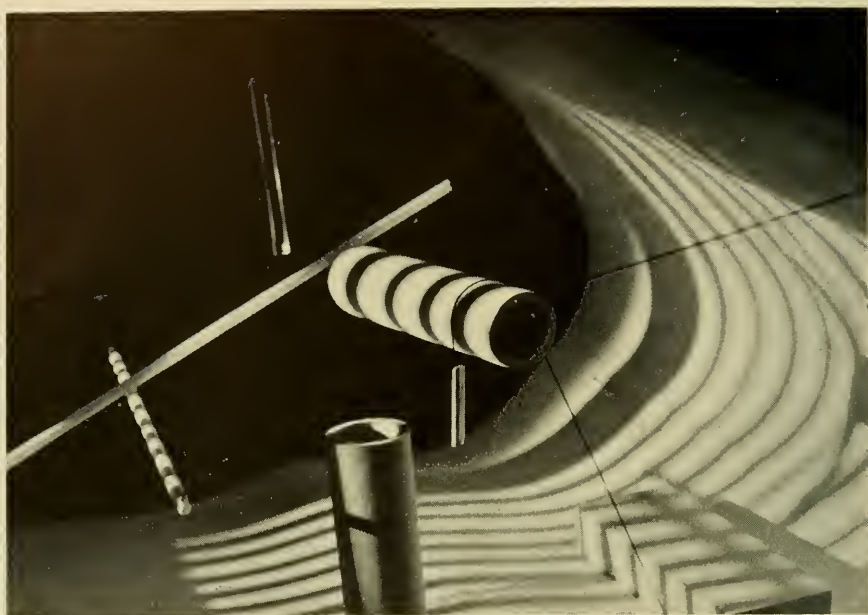


Figure 5. This could be a pattern of dark on light or light on dark. Notice how light alone makes a picture. Then ask yourself if there isn't another picture formed by absence of light over part of the area.

the fallen shadows of real objects with prints from either entire negatives or portions of them, or possibly a projected partially transparent object, such as a leaf. Even hand drawing may be combined into the photogram.

A clever application of the photogram which we recently encountered was a series portraying the use of electricity in the home. Flat shadows of electrical equipment fell across prints of homes, showing either how the home used it or why it needed the equipment. Sometimes the superimposed portion was just a shadow of wires or an electrical grid. A paper-cut-out bolt of lightning was shown harnessed to domestic tasks. Effective? You bet!

And so we find the influence of Moholy-Nagy, iconoclast, felt far afield as his students carry his teachings and their own original creative efforts to a very sound and practical application whether it be in a small photograph or an overwhelming architectural structure. One more point: Don't confuse exercises with practical results. Meaningless patterns intended to familiarize a worker with the extent and methods of control of light and shade were never intended as a neo-something or other work of art. The strongest advocate of the application of reality and common sense to photography and other artistic efforts—Mr. L. Moholy-Nagy.

H i n t s O n

Wash-Off Printing

Henry Weller, Jr.

THO ALL photographers at all interested in color, the Eastman Wash-Off Process is well known, but it may not be amiss if some pertinent remarks are offered by one who has achieved a measure of success with it. The hints here offered were selected with the express purpose of suggesting ways and means of helping the reader to save time, temper, and materials, bearing in mind at all times that economy in the use of materials is of paramount importance.

There are many who have not tried color printing and who are, to quote them, "waiting until color printing is simplified to the same extent as black and white printing." Admittedly, color printing is still a tedious affair in which the utmost of care must be exercised in every step; but why deny oneself expression in color because a bit of careful work is required? Think of the truly great pictorial workers who combine a number of black and white negatives, make from the combined positive a paper negative, and by means of handwork on either or both the positive or paper negative, control the values to suit. Does not such printing entail a considerable amount of tedious and careful work not to mention time? Are we really spending much more time, money and effort in the making of a color print? No, not much more when, in analysis, we compare color printing with pictorial methods of monochrome printing that are being used.

It is consoling to note how experience and a bit of practice will enable one to cut down on the time consumed in the making of a color print. At first we spent up to twenty hours on one print, and they weren't very good for all that! Now, from the start of making preliminary wedge tests to the completion of imbibition, four hours are spent. This is not given as a boast

or with the intention of establishing a speed record, there are undoubtedly many others who can do better. It is hoped that the hints given below will in any event enable the reader to become more proficient, suggest new and better ways of working, and, as a net result, expedite matters to such an extent that less of his valuable time will be consumed in the turning out of a color print.

THE NEGATIVES—To obtain the *ideal* set of negatives is the most difficult thing to do, for no matter how careful one is in exposing and processing, they never balance perfectly in *both* contrast and density. This matter of contrast and density may prove to be a poser to the beginner in color. The blue record (exposed through the blue, C5 filter) always tends to be softer i.e. of less contrast than the other two. It is therefore advisable to develop this negative longer to produce the same gamma (degree of negative contrast as related to subject contrast) as in the other negatives, but in so doing, the density is liable to be greater, even with the slight amount of compensation one can safely give by cutting the exposure. However, it is better by far to strive for equal *contrast* in the three separation negatives and unequal densities than vice versa, because it is easier to adjust for differences in density (by giving the print from that negative more or less exposure) than to adjust for a variance in contrast. It can be done of course, by varying the amounts of acid in the dye baths, and if one cares to do so and standardizes such procedure, it will work. Strive to maintain identical conditions for all color negative processing and adopt a definite system and dovetailing of work so that printing flows easily from step to step in orderly fashion. The secret of color printing can be summed up in three words: Cleanliness, System, and Standardization.

It is to be understood that in this discussion on color printing when "negatives" and "prints" are mentioned, we are specifically referring to the step-wedge which should be included on *every* set of color negatives. To discuss the densities and contrasts in the picture area proper would avail us nothing as they are different in the three negatives of a given set, and in accordance with our advocacy of standardization, we must have a common denominator to which we can refer in all discussion. The step-wedge is just such a constituent. The ideal set of color negatives bear reproductions of the original that match, step for step, in density and in contrast.

To help in the standardization of development, the following is suggested for those who use XF Pan film and either D-76 or Defender D-6 at 70°F. These times are adjusted to give equal gammas, the densities are to be corrected as will be dealt with below:

Red Record.....	A filter.....	13 minutes
Green Record.....	B filter.....	13 minutes
Blue Record.....	C ₅ filter.....	17 minutes

The Tri-Pac Film development times are given as follows:

When exposed as a unit and developed in the above at 70°F:

Front	Blue Record.....	17 minutes
Middle.....	Green Record.....	13 minutes
Back.....	Red Record.....	12 minutes

When exposed in a single mirror color camera the back film being exposed through the A filter, reduce its development time to 10 minutes.



"On the Glacier of Mt. Bianco"

Cesare Ginlio, Italy

First San Francisco International Salon

BALANCING THE DENSITIES—The use of the Wratten Copy Board Chart which contains a step-wedge, color patches, and registration marks, is an inexpensive and excellent device to photograph with each set. It is placed at the side of each still life, or may, in portraiture, be pinned on the subjects clothing in such a place as to be out of the intended picture area but in the negative area.

The least costly method of balancing the printing times is to use enlarging (or contact) paper on which to make test strips of the wedges only. On the enlarger, set to the desired degree of magnification, and obtain a good print of the wedge. It should have plenty of snap, each step must be readily discernible from those on either side and, in fact, should look as nearly like the Copy Board Wedge as is possible to make it. Having obtained a good print, label it, and then obtain *identical* prints from the other two negatives. Make a few exposures in succession for different times and develop them simultaneously. It will save time. Develop each test for identical times. The only variable should be the exposure times, and if the negatives have been developed to equal contrasts, balanced wedges will be readily obtained. When such a set has been made, note the ratio between the exposure times, it is a constant. Suppose the times and ratios are as follows:

Exposure		Ratio
Red	15 sec.	1.00
Green	17 sec.	1.13
Blue	30 sec.	2.00

The above is a general discussion of the procedure, and while it is realized that conditions of different workers vary considerably, we will give an outline of our method as a further guide. The paper used is News Bromide, Contrast grade. The #35 filter is used over the lens when the paper tests are made, and they are developed in the same developer as the Wash-Off Film and for six minutes. The exposure required by the News Bromide (under our conditions) is then identical to that required by the Wash-Off Film.

Should anyone using this method find that the Wash-Off Film requires, say, twice that of the bromide paper, this factor will apply to the exposures of all three negatives and is simply used as a multiplier of the paper exposure. In the above example, the Wash-Off exposures, assuming a factor of two would be:

Red	30 seconds
Green	34 "
Blue	60 "

The ratios are still the same. To obtain this factor between the paper and the Wash-Off Film, make a good print (of the wedge) on the paper, under the proposed standardized developing conditions, and then make a print on the film to *match* the densities of the paper print. Develop the Wash-Off under conditions which are to be used for its processing. The Wash-Off prints are best examined for comparison purposes in the wet state by placing in contact with a piece of white paper. Do not be satisfied with the factor thus found, but check it by making another Wash-Off print, do not

fix it immediately after development, instead make a finished relief. To check, see that the lightest step (white) of the wedge is clear celluloid, i.e. contains no deposit of gelatin. You can then be certain that your factor is correct, and if all processing is standardized, the small changes in emulsion speeds, will not materially affect results.

PRINTING HINTS—Use a cut film sheath to hold the Wash-Off Film when making enlargements. It is difficult to see the projected image through both the violet and safe filter of the enlarger, so place a piece of white paper in the sheath, and, using no filter, center the picture on the paper. Place suitable guides, we use two printing frames which are always available, along two sides of the sheath. They will mark the place for the sheath without the need for seeing the image.

Another helpful expedient is to draw on the white paper in the sheath an outline of some of the most prominent edges of the subject, then it will be easier to center each image in the picture area, and all three transfers will register very closely, thereby doing away with excessive trimming due to the edges of the films not coinciding.

ABOUT THE DEVELOPER—When making a 5 x 7 print, for example, it is a good plan to use (if your paper tests are developed in the same bath as the Wash-Off Film) eight ounces of developer in the tray. If only a portion of the eight ounce quantity is used, pour the amount used back with the unused developer and filter before developing the Wash-Off prints. The developer will then be of equal strength throughout, and by proportioning it into 2½ ounce quantities, each film will be developed in baths of equal strength. Agitation is constantly required throughout development anyway, but this quantity, while sufficient, will force one to rock the tray continuously. For 8 by 10 prints, a pint may be proportioned into three five-ounce quantities. It is of utmost importance that both the developer and fixing bath are filtered prior to the processing of the Wash-Off Film, as tiny dust particles may become imbedded in the soft gelatin and cause spots on the final print. Since the Wash-Off emulsion is not hardened in the manufacturing process, the gelatin will be exceedingly soft, and that is the reason why the temperature of the wash water should not be above 70°F.

It is a better plan to expose all three matrices first, the exposed ones being kept in a light-tight box, and then to develop them in succession, rather than develop immediately after exposing. It makes for a more smooth-running procedure, and the chances are that large voltage changes in the electrical supply will not take place in the short time required to expose the three prints.

ON SAFELIGHTS—The Series 1 Wratten Safelight is really the only one to be recommended for the handling of the film. It gives an abundance of light and will permit extensive handling such as required, for example, in the cutting up of 8 x 10 sheets into 5 x 7's and test strips etc. The following system may prove of interest, it has been used in the making of all prints since its adoption and is entirely safe. For loading the sheath and exposing, the Series 1 is used, the film is placed in the developer, agitated a bit to make sure it is quickly and evenly covered, the brown glass tray is covered, and the Series OA (bright greenish-yellow) is then switched on.

It is easier to see the timer and really takes less time to perform than to tell about it. When the time is up, the Series 1 is again used, and the print placed in the wash tray. After the last Wash-Off has been washed for a few minutes, the OA is again switched on and during the following time the bleach is prepared. Bleaching starts immediately.

METHOD OF WASHING—The preferred method of washing is as follows: taking a 5 x 7 print for example, the best way of washing it is to place it in an Eastman Portrait Film Developing Hanger and lay it in an 8 x 10 tray into which a hose is supplying a steady stream of water. The hanger prevents the film from moving about and from being washed out of the tray. In a tray of this size, the water is changed more often than in a tank. If this or the 8 x 10 film size is not generally used, only one hanger of each size is needed, as the first film is washed sufficiently (10 minutes) by the time the next film is ready.

STREAKS IN BLEACHING—Have you ever had this trouble? We had an epidemic of them until the cause was determined; they appear in the bleach soon after the film is immersed, and no amount of prolonged bleaching will remove them. The streaked areas do not bleach thoroughly and as a result are washed out in the hot water bath. They are definitely caused by hands contaminated with hypo which transfer the film to the bleach. This was discovered by accident one day when a film was removed from the hypo and transferred to the final wash, the next film was removed from its tray (after washing, since only one wash tray is used, each film is placed in a tray of water) and transferred to the bleach. Streaks resulted, and further investigation proved that the hand was contaminated with hypo when the film was transferred to the bleach. This, among other things, is the reason why Cleanliness was included in the summation before mentioned.

BLEACHING PROCEDURE—The bleach is contained in a beaker until needed. The film is placed in the empty tray, next size larger (5 x 7 in an 8 x 10, etc.) then the bleach is poured over the film. The use of the larger tray offers better opportunity for good agitation which is recommended.

DRY BEFORE DYEING—It is a good plan to dry the matrices before dyeing because by so doing, one is again standardizing conditions. Since any duplicate prints will be dyed from dry matrices, it is best to dry them after transfer so that dyeing conditions will always be the same. The wet and dry matrices (reliefs) take up the dye in different proportions, and it is hardly advisable to attempt to alter the dye baths to compensate for these different absorptions.

ABOUT THE DYE BATHS—For filtering the dye solutions, the Reeve Angel Company (New York City) #230 filter paper is quite satisfactory. No dye will remain indefinitely in solution and so one cannot expect the ABC dyes to do so. However, there are a few things which will cause a premature precipitation of the dyes and some precautions against them will be mentioned. The yellow dye does not give any trouble, the blue-green and magenta will however, but the precautions here stated apply to all three. Distilled water must be used for the solutions, any hardness in the water will cause the precipitation of the dyes; do not let the tempera-



Henry Weller, Jr.

Black and white reproduction from the original color print. The negatives for this print were made using a "simplified" method of making separations. Only two exposures were required: (1) using Dupac film and a K_1 filter, and (2) XF Pan with a C_2 filter. This procedure, used before the advent of Tri-Pac Film, somewhat anticipated Defender's Tri-Color Film Combination which now can be used to duplicate these two exposures. Tri-Pac now can also be used if the softness of the Red Record is not considered objectionable.

The printing employed was as outlined for Wash-Off and all "Hints" given were employed with one addition. A method of speeding up the dye transfer is being tested for reliability. The dye transfer times for this print were:

Magenta—5 min.; Blue-green—4 min.; Yellow—2 min.

ture of the baths go below 70°F. This may appear to be a difficult job in winter, but we store the dyes near the furnace. Dissolve the dyes in boiling water and when cooled filter before filling into bottles. Rinse trays and all other apparatus which comes in contact with the dyes with distilled water.

In controlling the contrast of the prints the writer uses a system of adding acid by drops to the dye baths. Twenty-eight percent acid is used and most subjects require but two drops of acid per ounce of dye solution. For greater contrast some subjects require five drops per ounce. On no occasion has more acid been used. The 28% acid is made with distilled water for reasons stated above. Of course the sizes of "drops" vary as the size of the orifice from which they form, so the above are to be considered only as suggested quantities. However, if one adopts the "drops per ounce" system, keep one dropper especially for this purpose.

EXAMINING THE RELIEFS—After the matrices have been dyed and rinsed in the dilute acid, it is advisable to check on the balance of the prints. The danger of scratching the matrices is considerable at this point, so the following method is recommended: Wet in the dilute acid two thin pieces of clear Kodaloid (slightly larger than the matrices) and place a sheet on top of two of them. Then assemble and place a piece of white paper in contact with the bottom film. They will be easier to handle and examine, as the Kodaloid adheres to the gelatin surface protecting it, and to disassemble them, *peel*, do not slide, off each successive film.

REGISTRATION—The use of a board with clamp attached, as supplied by the stationer, is an asset to non-slip registration. The first impression need not utilize the clamp, but when the second transfer is made, cover all but $\frac{1}{4}$ inch of the film area with a thin sheet of Kodaloid wet with dilute acid. Then register the matrix, slide the assembly under the clamp up to but not holding the Kodaloid, clamp it, check the registration, lift the matrix, and slide off the Kodaloid. Perfect registration will always result as the spring clamp on these boards is particularly good. Of course after squeegeeing the matrix down, replace a wet blotter underneath the paper and cover the assembly with a piece of thick glass to prevent the paper from drying out.

It is hoped that the suggestions here offered will help toward facilitating the work of those who use this interesting process. One can truly say that it is thrilling to watch the picture form in all its colors as each successive matrix is registered in place, and, in these final steps, one is repaid for all the work that went into the production of that one print. Having made that print, the real advantage comes in the ease with which duplicates are made, and if one does not depend too much on the corrective possibilities to which this process lends itself, i.e. the washing down of overprinted matrices, the duplicates are produced with the utmost of ease and within an hour. However if any washing has been done, note the time carefully and use the identical type of tray agitation. For those who chance to read the above but who have not yet tried the process, let me urge them to give it a trial. Wash-Off prints can be made from your choice Kodachrome or Dufaycolor transparencies,—but that is another story.

Is Photography Heading Towards Dictatorship?

John B. Cassoday

The Story of Wisconsin's "Hobby Lobby"

THE amateur is being regulated by statute. You are being limited, bound by definition and virtually told what you may and may not do.

You don't believe this do you? Just for your information, from facts which are believed to be accurate, ten states, (Alabama, Oregon, Florida, Georgia, North Carolina, North Dakota, New Mexico, Montana, Tennessee and Virginia), now have statutes upon their books regulating some phase of photography, and further, five states, (New Jersey, Michigan, Pennsylvania, and Wisconsin), have bills pending before their respective 1939 legislatures, regulating some phase or all of photography. Maybe you live in one of these states? If you do, have you ever looked at the statute or the pending bills?

The Maple Bluff Camera Club of Madison, Wisconsin, (the capitol city, in case you have forgotten), knows what such legislation looks like, for the amateurs of Wisconsin were confronted with this type of restrictive legislation in our 1939 Legislature.

Any quasi-legal disension must have a major and minor premise to support the logic of its theory. It is also fair to make certain general assumptions. We can safely assume, without argument, that photography is an "Art." Perhaps only a phase of Art, but it fits Webster's definition, "application of skill and taste to production according to aesthetic principles." True, also, that an art cannot be regulated by laws. It is an inner urge, and as such cannot be controlled. But, and this assumption is also

correct, photography is a business for those persons in professional practice, and though art is a large part of their daily existence, they are businessmen nevertheless.

Therefore, our major premise. Professional photographers, established in communities throughout the country, are being virtually run out of business by the itinerate cut-rate professional photographer.

Our minor premise. The amateur is an individual who is striving for self expression by the use of the art of photography. He must not be hampered or bounded by regulation, even though his efforts may reach such an extent as to interfere, to some degree, with the professional. In other words, the professional should solve his very real problems without circumscribing the legitimate activities of the amateur.

We will not insult the intelligence of those of you who have read this far by more than mentioning that the professional photographer is a most necessary part of the community life of America. Like all of us, he may be good, bad or indifferent, antiquated in his ways, or so advanced that he is known throughout the world as a true artist. One or the other, he is being actually ruined in his business by the itinerate photographer, who by volume production and high pressure sales methods soon strips even the smallest community of its photographic potentialities for years to come.

So the professional photographic group of this country, to protect its business and its investment in equipment against the very real abuses of the itinerate group, and to preserve a small vestige of its already waning source of income, has done just what you and I would do to protect our business. It doesn't matter whether you are a butcher, baker, or candlestick maker, a doctor, lawyer, or merchant, if your business is menaced you try to do something about it.

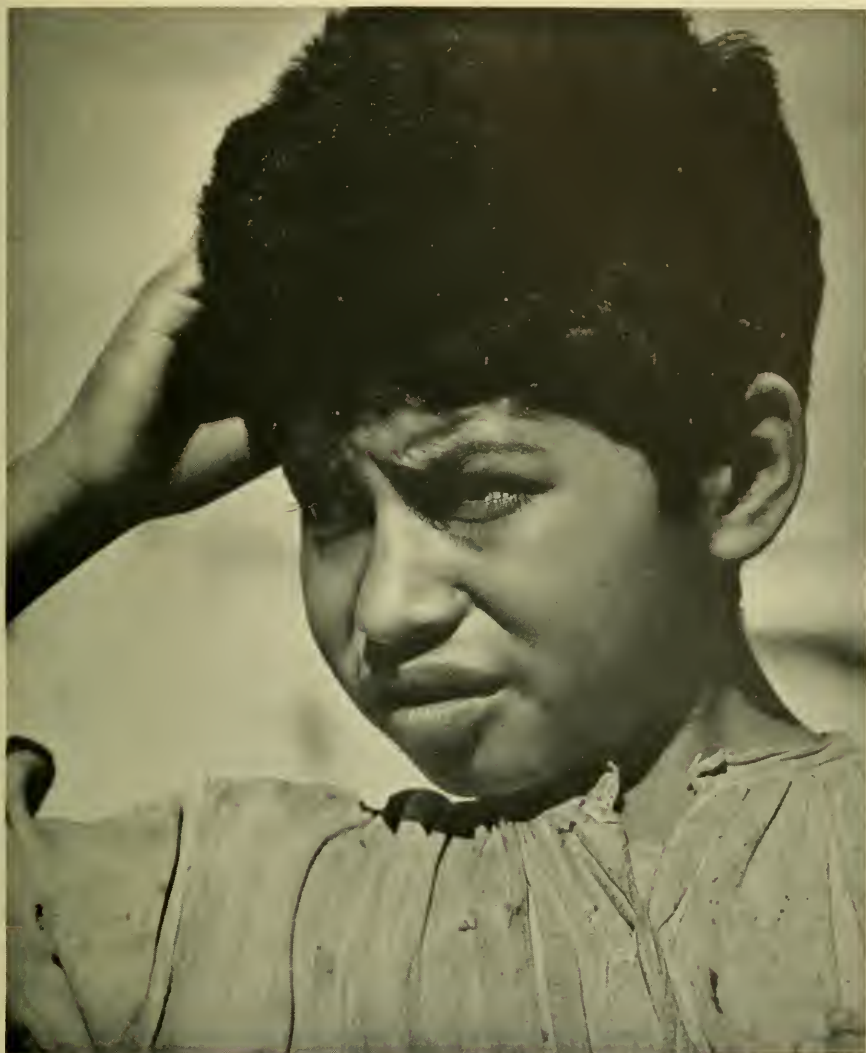
What would you do to protect your business? Form a National Association? Sure. The Photographers Association of America is the professional's answer to this. Form a State Association? Sure. This has been done in nearly every state, but it doesn't constitute a complete solution.

Pass a law? Is that the answer? Unfortunately that IS the answer the Photographers Association of America gave this year. "What of it! Let the professional pass all the laws he wants to, his laws won't hurt us!" If that is the way you feel about it, you may have a rude awakening some day and find that you have been irreparably injured by the law you so blithely ignored.

The Photographers Association of America hired eminent counsel and prepared a proposed draft of a law that would be used as a model by the various state groups. In February of 1939, the Wisconsin Professional Photographers Association caused to be introduced before the Wisconsin Legislature two bills, identical in wording, modeled after this proposed form of the national group. These two bills were known as Assembly Bill #321-a and Senate Bill #148-s.

Each of these bills proposes to exempt an individual which the professional photographer defines as:

"(d) Individuals engaged in photography solely for their own use and pleasure, or engaged in the casual sale of photographic reproductions



Bob Churchill

22nd Los Angeles International Salon

of their own making, provided that such individuals do not have a regular clientele or list of customers; do not in any manner, shape or form, solicit such orders, and do not sell or dispose of photographic reproductions made by themselves when the same are exhibited in recognized art or photographic exhibitions and the price for such reproductions is stated in the catalogue or other printed matter of such exhibition."

Though it is said that there is no issue between the professional and the amateur, the representatives of the Wisconsin Professional Photographers Association, indicated an entirely different attitude than one of complete friendship. These bills further carried out the intent of the professional group by prohibiting photographers of all class and character from selling any pictures, except through the channel which was specifically provided for in the bill, such as news photographers through their papers only, authors and writers for "illustrating their own manuscripts only," medical or dental practitioners for "clinical or educational purposes, or to illustrate manuscripts for publication," and others.

Most insidious of all the phases of the bills was the provision providing for four (4) years apprenticeship as an "apprentice photographer," three years as an "assistant photographer," before obtaining a license as a "professional photographer." Though the time element is in itself an insult to those persons who have, by education, prepared themselves for a chosen profession, it becomes more so when it is realized that the "apprentice photographer," during the four years of his apprenticeship,

"... shall enter into a contract of service, express or implied, whereby he is to receive ... in consideration for his services, in whole or in part, instructions in photography."

Even a nationally known photographer would be required to spend seven years to qualify as a "professional" in Wisconsin. The consideration of the service for four years, in the discretion of the "professional photographer," may be "*in whole or in part, instruction in photography.*" A return to the medieval days of the indentured artisan. To make matters worse, after completion of four years as an apprentice, the poor aspirant, under these bills, (modeled, remember, after the form proposed by the Photographers Association of America), must then spend three years as an "assistant photographer," all of which time must be "in the employ of a professional photographer."

It is plain that such conditions would make it impossible for the talented and ambitious amateur to enter the professional field.

The Maple Bluff Camera Club elected to resist this legislation because the members were incensed by the definition of the "amateur"; by the sheer effrontery of any group to propose legislation which would limit the rights of an individual to practice the art of photography in his own way; by the obvious attempt to close all avenues of competition and vest in an organized few the control of all phases of photography; and the apparent attempt to "close" the profession to all but the present professional group, thereby preventing any natural and spontaneous development.

Legislative talent was marshalled from the small membership of our camera club. Copies of the bills, and a complete digest of their contents

were mailed to all the clubs in the State of Wisconsin. We asked each club to have its members write letters of protest to their State Senators and Assemblymen, and to do it quickly. Members of our club met with other camera clubs and explained the proposed legislation. Each of the magazines of the country, as well as certain outstanding middle western amateurs, received a copy of this material. The response was most gratifying. The various legislators were besieged by letters from enraged home town amateurs. The magazines responded with editorials.

Our legislative committee gave considerable thought to the preparation of material to be used at the legislative hearings. Speakers were appointed to cover various phases of the bill. In order to show the quality of work being turned out by advanced amateurs, a small group of nationally and internationally known prints produced by salon contributors among our group were assembled and shown by one of the speakers during the course of his discussion. Magazine articles opposing such legislation were presented and filed with the committees by this speaker, as well as letters from nationally known photographers, petitions of individuals and resolutions of various clubs throughout the state. The bill was not reported out of the Senate Committee.

The Assembly committee hearing was much the same. This committee reported the bill out with recommendations for "indefinite postponement," and there it died.

We Wisconsin amateurs had for the first time shown our true concerted strength. We had defeated an attempt of the professional group, who were honestly striving to correct their own problem. In so doing, they had tried to restrict the activity of amateurs, and these amateurs, becoming indignant at this kind of rough handling, raised their unified voices in a wave of protest, exhibiting strength far beyond that with which they had been credited; a wave of protest which carried this proposed legislation to defeat. Though the professionals do not have the regulatory provisions of these bills at present, they are not helpless, for under Wisconsin law they have an adequate remedy at law.

When the professionals saw their first bills had been defeated, a substitute amendment was introduced, which has become the bill and we of the Maple Bluff Camera Club feel that we can now withdraw our opposition as a group, for the amateur is defined as:

"Individuals engaged in amateur or pictorial photography for their own use and pleasure or engaged in the sale of photographic reproductions of their own making."

The provision for four years apprenticeship has also been removed, and admittance to professional standing is contingent only upon the passage of an examination. An "assistant photographer" is defined as an individual studying or working under a professional for the purpose of acquiring the necessary knowledge to practice photography. He would pay an annual license of three dollars. But "assistant photographer" status is not required as a prerequisite to the taking of the examination for full professional status.

From this it will be plain that those parts of the bill which infringed upon amateur rights have been satisfactorily modified.

Many of us still object to any legislation of this kind. We feel that the state cannot regulate a profession such as photography, under its police powers, because the profession is not affected with any public interest for the protection of health, morals, or public safety. Such opposition is still making itself felt, individually and through various camera clubs.

This article is written so that amateurs in other states can profit by our experience. We, in Wisconsin, feel that we have temporarily averted a real catastrophe, temporarily only, for we will have it again. Like all Legislatures, ours is jammed with bills, most of which are much more important than these bills. So two years hence we will have this all to do over again. You may also be faced with the same situation. If you are, we hope this rambling tale of our experience will be of some help.

The writing of this all too short article necessarily leaves several questions unanswered. Where do we amateurs go from here? Are we to be true amateurs, interested in production of works of art only, for competition only, and if we are to be pure amateurs, under what rules shall we continue? Those of the athlete? Or, are we to become a group of quasi-professionals, selling all we can and competing with the professionals?

If the record of the activity of the professional in Wisconsin is indicative of a national movement, do we not need an organized national group and state groups, which are aware of this situation? Should not we have a central source of information, headed by competent men who will devote their whole career to protecting the amateur? Perhaps a bit of housecleaning, within our own group would be best, before we know what group we propose to prevent legislation from affecting.

When you have been as close to the fire as have we in Wisconsin, the thoughts herein contained may make you pause and think. Exactly what is an amateur? Where are we going? What does the future hold for us as amateur photographers? The amateur has been instrumental in raising photography to the heights it has attained today. All the laws in the world could not have caused this development. Are we in America to have our artistic pursuits dictated by any group?

This article is not simply a call to arms. The writer does not believe that the interests of the amateur and professional are fundamentally opposed. There are points of conflict, but these are of a nature which will yield to reasonable compromise. In fact this article is written because our experience in Wisconsin clearly points to the solution of these difficulties.

If the professional is firmly convinced that legislation will solve his difficulties, well and good. Let him draw up his bills and submit them to representative groups of amateur photographers for their criticism. Let the two groups cooperate in working out a bill which will be mutually satisfactory.

When that is done the amateur will be glad to help the professional in his efforts to obtain passage of such legislation. In many cases the amateur of today is the professional of tomorrow. He has a personal interest in bringing about reasonable business conditions in the profession.

Cinema Section

Edited by

William A. Palmer

A Simplified Method For Time Lapse Movies

THE movie magic that enables the camera to distort time in a screen presentation is well known. The apparent speeding up or slowing down of motion achieved by operating the camera at other than "normal" speed is a stunt so popular that nowadays all but the most modest of movie cameras come equipped to take pictures at a number of different speeds. Most "advanced" cameras are able to operate at many speeds from 8 frames per second to 64 frames per second. Such a range makes it possible to take scenes that, when projected at the "normal" rate of 16 frames per second, will show motion in double quick time (taken at 8 frames per second) or stretch motion to four times its original duration (taken at 64 frames per second).

The stretching out of time by slow motion pictures (remember, *slow motion* on the screen is produced by *fast operation* of the camera) makes the most thrilling sports pictures and is the most common type of time distortion used by amateurs. The opposite effect of speeding up time is usually practiced only for comedy effect or for obtaining increased exposure under poor light conditions. This time-condensing portion of the movie bag of tricks is limited because the slowest camera speed is 8 frames per second which will only accelerate screen motion to twice normal.

Carrying the time-condensation principle to greater extremes and taking pictures at much less frequent intervals than 8 frames per second, opens up a great opportunity for movie magic of the most amazing sort. For example the camera can be operated at only 1 frame per second or 1 frame per minute or even as slowly as 1 frame per hour. Such a technique enables one to show in a few seconds screen time an operation that may actually have taken days or weeks to take place.

A most interesting field for time-condensation photography or time-lapse photography as it is often called, is the recording of the life cycle of flowers and plants. No scene is more absorbing or more beautiful than a well made close-up in color of a flower bud gracefully unfolding to a full bloom. Many amateurs have seen pictures of this sort on the professional screen and have concluded that such spectacular results would require too much apparatus or too complicated a technique for amateur production. The facts are that many amateurs have made such time-lapse pictures with complete success and without becoming too involved in complications.

Don't get the idea that time lapse work doesn't sometimes get complicated. Professional technicians like Arthur C. Pillsbury who have specialized in botani-

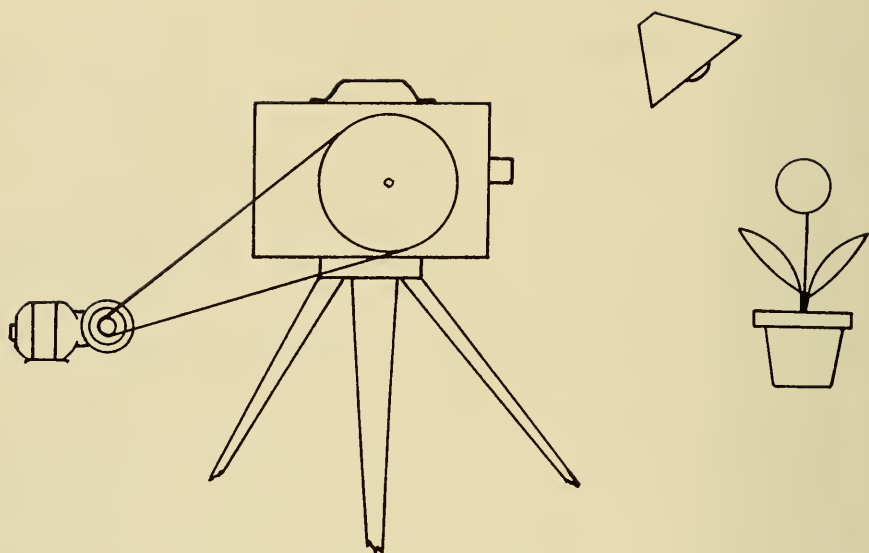


Diagram of Typical Set-up.

cal and biological movies, sometimes get a set-up arranged that makes a Rube Goldberg invention seem a model of simplicity. Many of the finest time-lapse scenes that Mr. Pillsbury has produced, however, were made with apparatus which is within the ability of any mechanically minded amateur to construct. It is this simplified technique which we recommend for those amateurs who would like to experiment in this fascinating field, combining perhaps a hobby of gardening with movie making.

Any time-lapse device is simply a method of making a motion picture camera take its pictures or frames at different intervals which will vary according to the subject matter. The interval may be a second, thirty seconds, five minutes, or fifteen minutes depending upon the expected duration of the process being photographed and the intended duration of the picture on the screen. For example, a picture of a blossom which takes five days to open is to last thirty seconds on the screen. The time interval between pictures then will be fifteen minutes. (Thirty seconds screen time at 16 frames per second is 480 pictures. To expose this number of pictures in five 24 hour days requires four pictures per hour.)

Since growing plants must have daylight in order to thrive, the ideal time-lapse outfit is a very complicated series of mechanisms which can be controlled by an electric clock and perform a whole cycle of operations for every exposure or frame, the cycle starting with the drawing of shades to exclude daylight after which lights are turned on, a single frame is exposed, the lights are extinguished, and the shades rolled back to admit daylight again. Obviously a device to do all these things automatically must contain many solenoids and switches, relays and motors. There are a few amateurs who have built such elaborate electrically controlled systems and for certain types of plant life pictures which must be taken over a considerable period of time, the elaborate set-up is necessary. However, for a great many pictures which amateur movie makers will enjoy making, a simplified system is quite satisfactory.

Pillsbury Continuous System

The simplified system of time-lapse photography which has been used by Arthur C. Pillsbury for many years is a continuous process as contrasted to the intermittent system mentioned above. Mr. Pillsbury found that a great many flower buds can be brought indoors and kept away from daylight where they will continue their cycle of blooming under a moderate amount of artificial light. He therefore brought his subjects, in the form of potted plants, into his laboratory and set them up in front of a camera. For illumination he used several 25 watt mazda lamps which were arranged around the subject and these were allowed to burn continuously. The camera was run by an electric motor geared down very low so as to turn the camera mechanism at the rate necessary to give the picture interval desired. This also was a continuous process, the camera being in motion continually, day and night, for the duration of the scene. In other words, the set-up was nothing more or less than a regular camera photographing a subject under reduced illumination but with the camera mechanism turning so slowly as to make a snail tired waiting for the next picture to come around. Typical camera speed varied from one frame per minute to one frame every fifteen minutes.

Certainly one can't beat this system for simplicity and the results to be obtained by the method are faultless—perfectly even exposure from start to finish and extremely smooth motion of the leaves and flower petals. This last characteristic really makes the system superior to some of the elaborate stop motion arrangement and is due to the fact that the exposures on each frame are very long, being often half the length of the time interval. (With a 180 degree shutter the exposure is half the duration of the time interval between pictures. A 90 degree shutter opening gives an exposure of one quarter the time interval.) Mr. Pillsbury still uses the continuous mechanism occasionally, although he has been taking time-lapse pictures for so many years that he has photographed one of about everything that can be successfully recorded by the method.

The amateur who wishes to make time-lapse pictures should provide himself with a camera that has a hand crank. The Cine Kodak Special, the Victor, and the Bolex are cameras that are regularly equipped with a hand crank. Certain other cameras such as the Bell & Howell 70 can be equipped for hand crank operation at the factory for a moderate sum. It is no particular trick either to have a shaft from the mechanism of most any camera extended outside of the case. One of the best cameras for time-lapse work is the old model "A" Cine Kodak, the original Eastman 16mm camera. These early models while bulky were extremely well built and can be purchased for a very modest outlay. Such a purchase is highly desirable because time-lapse work must of necessity tie up a camera for a period of a week or more at one time. A camera devoted entirely to the special purpose will not prevent one using his regular camera for other purposes.

Whatever the camera chosen, the hand crank shaft should be equipped with a pulley about six inches in diameter. The motive power can be a small "flea power" electric motor with a high ratio reduction gear attached. These motors are supplied in several styles of induction and synchronous motors and have output shafts which are geared to run about 1 revolution per minute. Because of the very high gear ratio and slow speed of the drive to the camera, a very small motor will be satisfactory.

On the output shaft of the motor and gear reducer unit, should be attached a series of 3 or 4 "stepped" pulleys of varying diameter. The smallest diameter

might be about $\frac{1}{2}$ inch and the largest 3 or 4 inches. These several sizes will allow for considerable change in the time interval. Further changes can be obtained by having a "stepped" series attached to the camera as well. Interchangeable pulleys are, of course, just as good as a "stepped" series.

Many other devices may be used to reduce the speed of an electric motor to the order of one turn per minute. Gear trains from old phonograph motors or clocks can be pressed into service, or the required speed reduction can be obtained from a series of belts and pulleys.

The operating procedure is to set the subject in position before a suitable background in a room from which daylight can be excluded. The camera then can be set on a sturdy tripod and focussed as for an ordinary close-up. The subject should be illuminated by two or three low wattage lights placed just as if they were ordinary photofloods, giving conventional lighting effects of reduced intensity. For Kodachrome filming, even with type A film, ordinary 25 or 40 watt mazda lamps will have too much red for proper color balance. To correct this difficulty, it is well to mix the light from regular mazdas with an equal number of low wattage "daylight" blue bulbs. If low wattage "daylight" bulbs cannot be secured, two of the new "daylight" photofloods can be burned in series. Ordinary photofloods burned at their rated voltage, of course, are impractical because of their short life.

The driving mechanism can then be fixed in position so that a small round leather belt can be run from the pulley on the motor to the one on the camera. The size of the pulleys chosen will determine the time interval for each frame, the interval being computed from the expected duration of the process being filmed. If 30 seconds scene time or 480 individual pictures are to be exposed during a flower opening that takes 24 hours, the time interval would be 3 minutes to each picture. Since the hand crank of a motion picture camera usually exposes eight frames per turn, the pulley on the hand crank shaft should be turned one eighth of the time interval or one turn every 24 minutes.

The fact that exposure with most cameras will be very long, (the shutter is open one half of the time interval) means that a very small lens aperture will be needed even with the weak light from 25 watt bulbs. Exposure time can easily be computed, but the amount of light on the subject may not be sufficient to get a reading with an exposure meter. Therefore the best plan is to make a test for proper exposure. If the camera has a variable shutter like the Cine Kodak Special, it would be well to close the shutter to $\frac{1}{2}$ or $\frac{1}{4}$ opening to reduce the exposure time.

Time-lapse photography requires patience, for it is nothing to wait two weeks for the completion of a single scene, but on the other hand it is an ideal cine activity for the person who cannot spend long periods at his hobby. A camera can be set running and it will then require no more attention than an occasional checking once or twice a day. In other words your hobby can be active all the time you go about your regular business and can keep you intensely interested in anticipating what progress has been made during your absence. Yet once the set-up has been made, very little time need be taken to keep the outfit going.

Flowers, of course, are not the only subjects which lend themselves to time-lapse photography by the continuous system. The germination of seeds, the incubation of insect larvae, the hatching of pond life, and a myriad of other biological specimens can furnish an inexhaustible field for this kind of movie magic.



"Men at Work"

R. F. McGraw, Sierra Madre, Calif.

First Award—Advanced Class

■ Mr. McGraw has made very clever use of his material in planning this picture. By adopting a camera position close to the near end of the train shed he "forces" the perspective to the point where the rapid convergence of the main lines is so pronounced as to almost take one's breath away. The eye zips into the vanishing point with lightning like speed, and it is this feeling of tremendous movement that gives the picture its emotional impact. Interest is also derived from the geometrically precise way in which all lines lead to the vanishing point. There are elements of the abstract in this picture, suggested by the alternating of the wedge-shaped areas of light and dark tone, and by the blank sky. Notice how perfectly the blank sky fits into the feeling of this picture. A cloud in this case would spoil everything. The one really important thing about a title is that it should not point away from the theme of the picture. We did not even notice the figures in this picture until the title called our attention to them. We are certain that Mr. McGraw was not thinking "men at work" when he made this shot. If he had been he would have gone in close and shown us something of what the men were doing. It was the geometrical forms which caught his eye and it is these which are emphasized. The title therefore should point to the elements which are stressed, not to the men which are entirely unnecessary to the picture.

Data: 4 x 5 Korona View; 7½" Turner-Reich; 2 P.M. bright sun; Du Pont Superior in Pyro Acetone; 10½ x 13½" print on Agfa Brovira in D-72, toned.

Second Award

Advanced Class



*M. Arthur Robinson,
Berkeley, California*

It has often been said that it is the little things which make all the difference between an ordinary and an exceptional picture. This print may serve as a good example of the truth of that statement. It is lifted out of the ordinary by the play of light on the water. The changes in lighting over the water area, creates an interesting background pattern, into which the boat is nicely fitted; an abundance of subtle tonal graduations are provided which intrigue the eye; and the shadowed parts of the water are so disposed that they function admirably in keeping the eye within the picture space. Imagine how this picture would look

without the cast shadows on the water. Would it not be just another picture postcard instead of the satisfying thing that it is?

Data: 4 x 5" Anto Graflex; 6" Carl Zeiss lens; 1/60th sec. at F:6.3, on E. K. Ortho film, in M. Q.; no filter; 11 x 14" chloro-bromide print in M. Q.

Third Award

Advanced Class



"Evening Fog"

*William Langdon,
Chicago, Illinois*

This picture gives us the atmosphere, the feeling, of a rainy day in expert fashion. It is plain that the essential picture elements are contained in the upper and left two thirds of the picture space. The building on the right with its accompanying foreground shadow, serves only as a frame. We need such a dark foreground object to firmly establish recession of planes, but we can see no reason for including so much of it. As things are this distinctly uninteresting dark mass occupies about one third of the picture space, and tends to over balance the remainder of the picture elements. If we trim from the right we must also trim from the base to maintain satisfactory print proportions so it is plain that the amount we can take from the right is limited by what can be chopped off the bottom. We do not need more than about a third of the dark building as now shown, but if we trim that much away we begin to crowd our foreground figures when we trim a proportionate amount from the base. We therefore suggest trimming a little more than one half of the building away, It is, of course, unfortunate that the largest

taking a corresponding amount off the foreground. lamp post should run into the woman's head.

Data: 11 x 14" bromide print.

Fourth Award

Advanced Class

■ This interesting subject is handled with appropriate simplicity and dignity. Good use is made of the very expressive hands and these are well controlled as to posing and tone value. The placing is obviously determined by the relation between the face and the hands. Matters must be, and are, arranged so that the face and hands balance each other within the picture space. If it were not for the hands the head would, of course, be placed more to the left. It is unfortunate that a faint cast shadow from the head is visible on the background. This form is unrelated to the figure and consequently is disturbing. Shadows such as this are eliminated by moving the model away from the background, and by lighting the background separately to kill shadows when that is necessary.

Data: Voigtlander Superb; 1/25th sec. at F:16; 11 x 14" bromide print.



"Octogenarian"

*Florence M. Reingold,
Chicago, Illinois*

Fifth Award

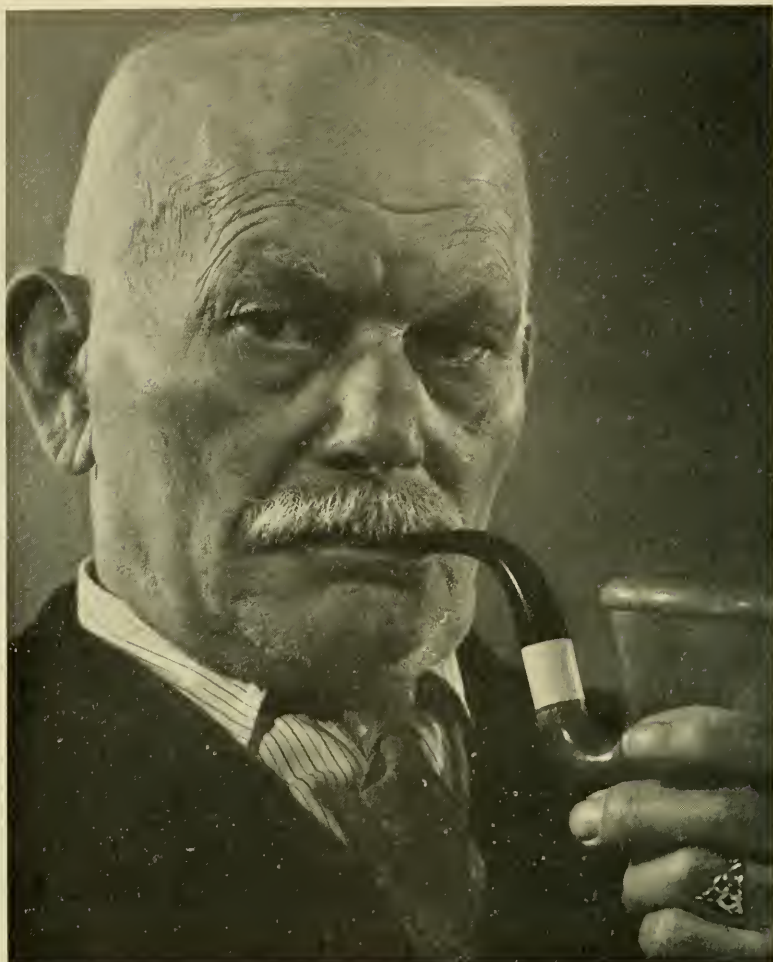
Advanced Class

■ The Central European photographers, among whom Mr. Kornic is an outstanding leader, are distinguished by the extremely effective use which they make of outdoor lighting, particularly back lighting or acute side lighting. They have learned that light can transform the most commonplace subject into a thing of interest and beauty. Notice in this case how the back lighting causes the church to stand out in a glow of warm sunshine, and sets up a succession of receding planes in the distant mountains. Imagine how "dead" this subject would be under a frontal lighting. The foreground in this picture is weak and uninteresting. Shadows or some dark mass in the foreground would break up this monotonous area and enhance the sense of a third dimension.

Data: 6 x 6 cm. Rolleiflex; 3" Zeiss Tessar; 1/100th sec. at F:4; E. K. Pan film in Gevaert fine grain formula; 11½ x 12" print on Agfa bromide paper in M. Q. Duto diffusion screen. Prints may be obtained at the price of \$10.00 upon application to Camera Craft.



*Ante Kornic,
Ljubljana, Jugoslavia*



"Fritz"

Roland G. Spedden,
Detroit, Mich.

First Award—Amateur Class

■ Mr. Spedden has shown rare insight in his handling of this excellent portrait subject. The attributes which call for emphasis here are the massive, sculpturesque qualities of the head and the stolid, rigid dignity of character. Strong light striking both sides of a head is usually frowned upon because it departs so greatly from any effect which could be obtained under natural light. Observe however that in this case the lighting fits the subject beautifully, for it brings out the massive, square-cut qualities of the head by placing emphasis on contour. Notice that the expressive strength of the eyes is held down by keeping them in shadow and that this in turn throws the emphasis upon the structure of the head. There is a certain stiff formality about the pose which is in keeping with the dignity of the subject. The large print also does its bit in completing the characterization which is so admirably achieved in this picture. It is unfortunate that the tip of the ear is cut by the left edge of the print. This tends to attract too much attention to the ear. Enough can be added to the left of the print to leave the ear clear without injuring the placing of the head in the picture space, so that should be done.

Data: 5 x 7" camera; 8½" Zeiss Tessar lens; 1 sec. on pan. film in Agfa 47; 3 lights used; 13 x 16" print on E. K. Projection 3, in D-52; Agfa gold toner.

Second Award

Amateur Class

■ We never seem to get over a certain awe-struck surprise upon observing the astonishing strength of effect which can often be achieved by suggestion, rather than by a full rendition of detail. This does not mean that full detail is never desirable. It is often just what we need as is proved by the preceding picture and the one which follows. This picture is a splendid example of how the spirit of a thing, in this case the dog, can be presented largely by way of suggestion. Details are obscured by the back lighting but the essential spritely playfulness of the puppy (the emotional qualities of the subject) are all there, and are perhaps more fully realized because the eye does not have to bother with details which are not necessary to this presentation. Whether to photograph for detail or not depends entirely upon the effect desired in the finished print; depends upon what qualities in the subject are to be emphasized. Here again we see the very great importance of fully realizing the finished picture before the shutter is snapped.

Data: E. K. Bantam Special; Kodak Anastigmat F:4.5; 1/50th sec. at F:11, on E. K. Panatomic X, in DK-20; 5:30 P.M.; 11 x 14" print on Kodabrom G-2, in D-72.



"Snooty"

Dan B. Rumpf,
Topeka, Kansas

Third Award

Amateur Class

■ Anyone at all familiar with the desert or semi-arid regions of California, will quickly recognize this as a distinctly typical scene. They will also appreciate that Mr. Breeden has been quite successful in capturing the atmospheric quality of his material. The glaring white roof shouts "hot weather" in no uncertain terms, while the absence of aerial perspective clearly shows the clarity and dryness of the atmosphere. Notice the great importance of the foreground shadow. Without it the picture would certainly fall apart. Its mass serves to balance that of the hill and the cabin; aside from the cabin itself it is the only important factor contributing a sense of the third dimension; it gives a solidity to the base of the print which is needed to support the elements above. Just imagine how weak this picture would be if the whole of the foreground were brightly illuminated as it is in the lower left.

Data: 4 x 5 Speed Graphic; 5½" Kodak F:4.5 lens; F:22 at 1/25 sec.; DuPont Superior cut film developed in Pyro-Acetone solution by inspection; Brovira 8 x 10" glossy med. in D-72 sol. 4:1; K2 filter; tripod used; no cropping on negative or print.



"Landscape and White Roof"

John P. Breeden, Jr.,
Palo Alto, California



"Glee"

John H. Vondell,
Amherst, Massachusetts

■ There are few combinations of photographic treatment and subject matter that fit together so perfectly as a high key rendition of a lovely child. For high key treatment brings delicacy and highlight sparkle to a print and these are just the qualities that shine out of the face of this charming little girl. The lighting and general technique are excellent here. Notice the subtle modeling which gives roundness to the dimpled cheeks, and the fine rendering of highlight detail throughout the print. The placing of the head in the picture space is really quite satisfactory and we are admittedly splitting hairs to complain about it. Be that as it may we feel that for ideal placing the eyes should be just a trifle higher. Trimming away about half the space above the head would be all the correction we would desire.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ R. B. Tele-Graflex; $6\frac{1}{2}$ " Zeiss Tessar F:4.5; $1/50$ th sec. at F:8, on Agfa Isopan in D-7 (Metol-Pyro); $9\frac{3}{4} \times 12\frac{1}{4}$ " print on Agfa Indiatone Royal in M. Q.



"K.P."

O. E. Longtin,
Fresno, California

■ In the correspondence department of this issue Mr. Jack Wright presents some interesting views on photographic subject matter. As luck would have it this picture turns up as a possible answer to some of his remarks. We make no comment at this time in the hope that readers will do the job for us.

The success of this picture depends on two things: texture and arrangement. The print is technically excellent so that textures are well rendered. Notice how the peeling of one potato and the inclusion of the knife add a variation of texture that is of considerable help. The composition is reasonably

sound but not particularly exciting. Weakest part of the composition lies in the three potatoes to the right of the one which cuts the left edge of the print. These rather run together. If the farthest of these were turned with its length running to and from the camera, it would then carry higher up in the print and the slight confusion of form would be eliminated. Some will feel that with the knife and bowl on the right the picture becomes a bit heavy on that side. It is possible to obtain an equally effective presentation by trimming from the left until the knife handle reaches almost to the left edge of the picture. This arrangement in turn has the weakness of appearing a bit crowded. So far as we can see neither composition has much advantage over the other.

Data: 5 x 7 Korona View; 12" R.R. lens; exposure at F:64 by artificial light; on Agfa Plenachrome in DK-76; 11 x 14" print on Agfa Brovira Royal in Amidol, split toned. Prints will be exchanged with other prize winners in these competitions only.

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: William Langdon and Florence M. Reingold, for the Fort Dearborn Camera Club; Ante Kornic, for the Fotoklub Ljubljana; and R. F. McGraw, for The Pack Rats.

The following won prizes for their clubs in the Amateur Class: John H. Vondell, for the Amherst Camera Club; Roland G. Speddon, for the Detroit Camera Club; and O. E. Longtin, for the Fresno Camera Club.

The following prize winners have no club affiliations: M. Arthur Robinson, Dan B. Rumpf and John P. Breeden, Jr.

Contributing Clubs

Amherst Camera Club (Mass.)
California Camera Club (San Francisco)
The Camera Clique (St. Louis, Mo.)
Camera Club of Richmond (Va.)
Cleveland Photographic Society (Ohio)
Dallas Pictorialists (Texas)
Detroit Camera Club (Mich.)
E.P.I.C. Pool of San Francisco
Fort Dearborn Camera Club
Fotoklub Ljubljana (Jugoslavia)
Fresno Camera Club (Calif.)
Indianapolis Camera Club (Ind.)

La Porte Camera Club (Ind.)
Long Island Photographic Society (Flushing, N. Y.)
Marin Camera Club (San Rafael, Calif.)
Montavilla Camera Club (Portland, Ore.)
The Newton Ring Club (Pelham, N. Y.)
Oakland Miniature Camera Club (Calif.)
The Pack Rats (Pasadena, Calif.)
Photographic Society of India
Photographic Society of San Francisco
San Jose Camera Club (Calif.)
Sierra Camera Club (Sacramento, Calif.)
Skitchawaug Camera Club (Springfield, Vt.)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	43
Indianapolis Camera Club.....	11
Pictorial Photographers of America.....	6
Fotoklub Ljubljana.....	5
Miniature Camera Club of Oakland.....	5
Fotoklub Zagreb.....	3
Los Angeles Camera Club.....	3

Small Clubs Advanced Class

The Pack Rats.....	9
Yellow Springs Camera Club.....	7
The Camera Clique.....	2
Aluminum Camera Club.....	1

Large Clubs Amateur Class

Camera Club of Richmond.....	10
Detroit Camera Club.....	9
California Camera Club.....	6
Miniature Camera Club of Oakland.....	4
Photographic Society of San Francisco.....	4
Cleveland Photographic Society.....	3
Indianapolis Camera Club.....	1
Sierra Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool of San Francisco.....	13
Dallas Pictorialists.....	12
Signi Phi Nothing.....	5
San Jose Camera Club.....	3
Vancouver Photographic Society.....	3
Amherst Camera Club.....	2
Florida Camera Club.....	2
Fresno Camera Club.....	1
Midwood Camera Club.....	1

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired, on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Correspondence*

About Opinions

Dear Sirs:

May I, with the greatest possible good nature—which I sincerely hope he understands to be the case—reply to the letter by H. E. Cox on your Correspondence page in the July number, entitled "Competition Comment"?

Opinions in the photographic world, I find, are held with such singular unwaivering conviction that the holder is completely right and the other fellow sadly mistaken or perniciously, unreasonably, objectionably in the wrong. I doubt if it is possible to state any conclusion regarding photography, no matter how reasonably attained, that will not provoke accusations of "dictatorship" and "intolerance" from those who have not happened to follow similar lines of reasoning to similar conclusions.

The criticisms which Mr. Cox expresses fit his own statements quite as readily as they do mine. He is inflexible in his unwillingness to permit me to be inflexible, intolerant in accusing me of intolerance, dictatorial in charging me with being dictatorial, besides being quite mistaken in assuming that those who write your pictorial comments—if I may speak for others as well as myself—ever make any attempt to "force their own particular practices down" anyone's "throat," to use his own words. I should say we are glad to offer our best hospitality to those who care to play ball with us, but that they will over-reach themselves if they assume we plan to force it upon them.

It is my business as a teacher, as it was in writing the pictorial analyses in the June number, to arrive at reasoned conclusions and to state them. I see no advantage whatever in shillyshallying about it—in taking a maybe-I'm-wrong-in-saying-so attitude. It must be pretty well understood that in matters of art there is obviously no simple right and wrong. The best possible "right" that can be arrived at is never more than the reasoned opinion of a perceptive minority group. Must I therefore efface myself and allow my equally positive, but oppositely minded critic to take my place? Why?

Finally I would like to agree with Mr. Cox on one point. He states that "art would be dull indeed if we all aimed at a similar interpretation." Quite so—only I transfer his meaning over to the realm of words and ideas, where I want the freedom and he does not wish me to have it!

Sincerely,

Roi Partridge.

Mills College, Calif.

P. S. May I take this opportunity to correct an error on page 286 of the June number of *Camera Craft* where a typographical mistake reverses my meaning. I was printed as saying a building was so honest as to become "undistinguished." The prefix "un" should be omitted.

What Is "Good" Subject Matter

Dear Sirs:

I note that in your June competition you gave the first award in the advanced class to a photograph of two fence posts and some strands of barbed wire. In your March competition one of the first awards went to a photograph of a piece of coiled rope.

I hope no one will take offense if I say that I believe these awards, and others like them, illustrate a weakness in the present photographic fashion and show that some of the savants of photography are getting off on by-paths which will lead them away from real photographic truth.

Photography is above all others the art of the people. It has enabled millions of men and women, untrained in the formal arts but sensitive and desirous of self-expression, to attain that expression. Likewise the men and women who look at pictures learn not only what the world is doing in a news way but attain a pleasure from well-conceived and well-executed photographs which borders close upon true artistic appreciation.

Because photography is the art of the people does not mean that every photograph must be simple and comprehended at a glance. Least of all must every photograph "tell a story," after the manner of many magazine covers, for nothing in the way of home decoration would be more wearing than a "story picture" hung on the walls, week after week.

We are told that the excellent pictorial photograph should convey to the beholder the mood of the maker, as he composed his picture and exposed his film. By means of composition, balance, tone, and the play of light and shadow, it should arouse in the viewer a definite thought and feeling. The more definite this stimulation, the more successful the picture.

I would like to point out that the above standard for a successful photograph makes it impossible for composition, by itself, to be enough. Composition is vitally important but, if it were the sole essential, then all the photographer would need to do would be to arrange pieces of rope, posts and wire, potatoes,* cabbages or any other objects into a design that was compositionally sound and he would have a picture. I venture to say that a dozen potatoes, carefully arranged, could be in perfect compositional harmony. It would be difficult, however, to get them to arouse a mood.

I spoke a moment ago about photography being the art of the people. It is the belief that photography is the people's art that causes me to regret a tendency on the part of some photographic critics to build up an esoteric cult which professes to see things in pictures which are not apparent to the ordinary man and woman. Cubism, post im-

*See Fifth Award, Amateur Class page 388—Ed.

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

pressionism and many other movements in painting have done this sort of thing—some of them to such an extent that one wondered if the cubists and post impressionists were not adroitly pulling the leg of the public and enjoying a laugh at the expense of those whose gullibility was as great as their desire to be thought artistically knowing.

When men and women, who profess to know photographs, go into ecstasies over a coiled piece of rope or some posts and a bit of barbed wire, it seems to me they are putting themselves into the same class with the artist who produces a horrible and meaningless conglomeration of paint and then takes the stand that if the beholder gets nothing from it, the deficiency is in the sensibilities of the beholder and not in the ability of the painter.

I am willing to grant that perhaps it IS a deficiency in myself which prevents my finding as much beauty in rope or barbed wire as some others profess to find. I cannot help feeling, however, that photography's great opportunity is to become to an even greater extent the art of the people and to bring to the people artistic education and artistic satisfaction of which no other art is capable.

If this is photography's opportunity, then those who foster photographic cults which profess to find beauty where there is, in fact, no beauty and not even intelligence, are doing photography a decided disservice.

Jack Wright.

San Jose News,
San Jose, Calif.

What Is Your Photographic I. Q.?

It takes less than five minutes to test your photographic knowledge with the True-False Test. Read the following statements and check each one as being either true or false. Then turn to page 397 to determine your score. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good, 80%; good, 70%; fair to bad, below 70%.

1. In home movies, flicker is more perceptible when using an extra high power lamp than with one of lower intensity.

☐ True
☐ False

2. Sulphate of paramethyl-aminophenol is frequently used in developers.

☐ True
☐ False

3. Generally speaking average near views (10 ft. or less) require more exposure than average distant views (100 ft. or more).

☐ True
☒ False

4. Kodachrome film should be stored in tin cans in which the blotters must be frequently moistened.

☐ True
☐ False

5. A ten per cent solution is made by mixing one ounce avoirdupois of chemical (437½ grains) for each ten fluid ounces.

☐ True
☐ False

6. In contact printing flat, thin, weak negatives should be printed on a grade of paper that will give a degree of contrast above normal.

☒ True
☐ False

7. A finished positive film can be chemically reversed into a negative.

☒ True
☐ False

8. Glossy paper will produce a "deeper" black than matte paper.

☐ True
☐ False

9. In the early morning or in the late evening it will be found that the light is excessively blue.

☐ True
☐ False

10. In photographic parlance a 4" x 5" negative projected to an 8" x 10" print is considered to be a four time enlargement.

☐ True
☐ False

Forthcoming Exhibitions

Huguenot Camera Club First Anniversary Salon. Address Huguenot Camera Club, Y.M.C.A., New Rochelle, N. Y. Closing date August 15, 1939. Entry fee \$1.00, limit four prints. Entries accepted from all photographers who are residents of Westchester County.

Seventh International Salon of Pictorial Photography. Address Fotoklub Zagreb, Masarykova 11, Zagreb, Yugoslavia. Closing date August 20, 1939. Entry fee \$1.00, limit 4 prints. October, 1939.

The Fourth Western Ontario Salon of Photography. Address Mr. A. E. Adams, Salon Secretary, London Camera Club, 212½ Dundas St., London, Ont., Canada. Closing date August 21, 1939. Entry fee \$1.00, limit four prints. September 11 to 16, 1939.

Fifth International Focus-Salon. Address International Focus Salon, Bloemendaal, Holland. Closing date August 25, 1939. Entry fee 2, 5 florins, limit 4 prints. September 30 to October 15, 1939.

Club Notes

500 International Photographic Prize Competition. Address Messrs. Franke and Heidecke, Brunswick, Germany. Contestants living in the United States may send their entries to Burleigh Brooks, Inc., 127 W. 42nd St., New York, N. Y. Closing date August 31, 1939. All owners of a Rolleiflex or Rolleicord camera are eligible.

The London Salon of Photography, 1939. Address the Hon. Secretary, The London Salon of Photography, 26-27, Conduit St., New Bond St., London, W. 1, England. Closing date August 30th. Entry fee 5s. Sept. 9th to Oct. 7th, 1939.

Annual West Virginia Salon of Photography. Sponsored by the Charleston Camera Club in cooperation with the West Virginia State Chamber of Commerce. Address Salon Committee, 903 Sixth St., Charleston, West Virginia. Closing date August 31, 1939. Entry fee \$1.00, limit six prints. Sept. 17 to 20, 1939.

The Seventh Irish Salon of Photography. Address The Hon. Secretary, The Irish Salon of Photography, 89 Grafton St., Dublin, Ireland. Closing date September 9, 1939. Entry fee 4/6, limit six prints. September 30 to October 7, 1939.

The Third Indian International Salon of Photographic Art. Address Mr. N. B. Cooper, A.R.P.S., Honorary Secretary, Camera Pictorialists of Bombay, 243, Hornby Road, Fort, Bombay, India. Closing date Sept. 8th. Entry fee \$1.25, limit 4 prints. November 1939.

The Sixth Canadian International Salon of Photographic Art. Address Exhibition Secretary, Canadian International Salon of Photographic Art, National Gallery, Ottawa, Canada. Closing date Sept. 9th. No entry fee. Oct. 20th to Nov. 12th, 1939 and afterwards in other Canadian cities.

XV Salon Internacional de Fotografia, Zaragoza, Spain. Address Secretario de la Sociedad Fotografia de Zaragoza, Plaza De Sas, 7, Zaragoza, Spain. Closing date Sept. 15th. Entry fee \$1.00. October 1939.

The First Annual Atlanta National Photographic Salon. Address C. S. Mingledorff, 252 Peachtree St., Atlanta, Ga. Closing date Sept. 18th. Entry fee \$1.00, limit four prints. Only prints of amateur photographers will be accepted. October 1st to 15th, 1939.

Fourteenth Annual Salon of Photography. Address The Salon Jury, Museum of Fine Arts of Houston, Main & Montrose Blvd., Houston, Texas. Closing date Sept. 23rd. Entry fee \$1.00, limit 4 prints. Oct. 7th to Oct. 29th, 1939.

Fourth International Exhibition of Photography. Address Hon. Secretary, Windlesham Camera Club, Hallgrove, Bagshot, Surrey, England. Closing date September 20, 1939. Entry fee 4s., limit four prints. October 16 to 21, 1939.

Fourth Annual Salon of the Cedar Rapids Camera Club. Address Robert E. Campbell, Salon Sec., 2622 Country Club Pkwy., S. E., Cedar Rapids, Iowa. Closing date Oct. 1st. Entry fee \$1.00, limit 4 prints. Nov. 5th to Nov. 19th, 1939.

The New York Salon of Photography 1939. Address the Salon Committee, The Camera Club, 121 W. 68th St., New York, N. Y.

Closing date October 2nd. Entry fee \$1.00, limit 4 prints. Oct. 29th to Nov. 30th, 1939.

Thirteenth Annual Open Exhibition of the Lincoln Camera Club. Address Hon. Exhibition Secretary, Miss E. Redfern, 364 Burton Road, Lincoln, England. Closing date October 7, 1939. Entry fee 1s per print. Limit four prints. November 4 to December 3, 1939.

First Annual National Philadelphia Salon of the Miniature Camera. Address Charles Heller, Salon Chairman, Architects Bldg., 17th and Sansom Sts., Philadelphia, Pa. Closing date October 16, 1939. Entry fee \$1.00, limit four prints. November 11 to 26, 1939.

Springfield Salon of Photographic Art (And Pictorialists International). Address John Funaro, Director, 110 Rochelle St., Springfield, Mass. Closing date November 30, 1939. Entry fee \$1.00, limit four prints. January 3 to 31, 1940.

Second Western Pennsylvania Salon. Address W. C. Munhall, Greater Pittsburgh Photographic Society, Inc., 210 E. Park Way at Sandusky St., N. S. Pittsburgh, Pa. Closing date December 6, 1939. Entry fee \$1.00, limit four prints. January 10 to 31, 1940.

Springfield's Second International Salon of Photography. Sponsored by The George Walter Vincent Smith Art Gallery. Address Cordelia Sargent Pond, The George Walter Vincent Smith Art Gallery, Springfield, Mass. Closing date December 6, 1939. January 3-24, 1940.

The 1938-39 season drawing to a successful close has been the best in the history of The Photographic Society of America. Preparations for next season are now in full swing and the expanded program is planned to serve both the individual members and the affiliated clubs. The latter now number about 275.

Rules and the necessary forms have been or shortly will be distributed for the Loan Exhibit Service, the Club Print Interchange, the Continental Monthly Print Contest and the 100-Print Travel Salon. Plans for the Fifth Annual Convention, to which all amateurs are welcome, which will be held in New York on October 7 and 8, are practically completed. An exceptional program by famous and competent speakers has been prepared.

100-Print Travel Salons have been received from Hungary and France and are now being booked for showings all over the country. The Director is Dr. Paul E. Truesdell, 45 Orange Road, Montclair, N. J. A 100-Print Salon, to be exhibited in Hungary, France and one or two other countries, will be assembled in the Fall.

The Society's fine JOURNAL and its BULLETIN, issued on alternate months, are sent to all members and affiliated clubs. Membership is only \$5.00 per year. Application blanks and full information may be obtained by writing to the Secretary, B. H. Chatto, 1300 Milton Avenue, Pittsburgh, Pa.

The California Camera Club, of San Francisco, Calif., will bring out its club paper, "The View Finder," in an entirely new format beginning with the July issue. The new paper will be twelve pages, approxi-

mately 5½ x 8 inches in size, and will be printed on book paper. The winning print in each month's competition will be reproduced as will other appropriate pictures. The new "View Finder" will be edited by C. Stanton Loeber and besides club news it will carry articles on various photographic problems.

The Houston Camera Club, of Houston, Texas, held their Second Annual Members Exhibition, at the Houston Museum of Fine Arts, during June. 108 prints were exhibited and observers held their quality to be excellent.

The Brooklyn Camera Club has established quarters at 1619 East 4th St., Brooklyn, N. Y., where they have a large darkroom and studio for the use of members. Photographers interested in joining this group should write to the Secretary, Louis A. Walvick, 901 Ave. S, Brooklyn, N. Y.

The Japanese Miniature Camera Club of San Francisco is an active, enthusiastic group of twenty members, who are working mostly with Rolleiflex cameras. The group is offering its members a series of interesting programs and a lively monthly competition. They will be pleased to exchange prints with other clubs. Communications should be addressed to the Japanese Miniature Camera Club, c/o W. Nakahara, 1903 Bush St., San Francisco, Calif.

The Golden Empire Camera Club, of Marysville, Calif., points with pride to the drawing power of their programs which enables them to bring members from neighboring towns and cities, over distances of many miles. The club has members in Colusa, Williams, Arbuckle, Winters, Gridley and other points.

When in Chicago, photographers will do well to plan on a visit to the club rooms of the Chicago Camera Club, 137 No. Wabash Ave., for they continually feature fine photographic exhibitions. During July, two shows will be displayed: a one-man show by Robert A. Officer and a non-resident members' show. During August, a Camera Craft Traveling Salon and a group of prints from the West Suburban Camera Club will be exhibited. Other fine exhibits already scheduled will be announced at a later date. The Spring Semester of the Chicago Camera Club was completed on June 6th after a very successful term, with a capacity enrollment. Applications are now being accepted for the fall term and should be addressed to Rene S. Lund, care of the Chicago Camera Club.

The Ninth Annual Convention of the Biological Photographic Association will be held Sept. 14-16, at the Mellon Institute for Industrial Research, Pittsburgh, Pa. A program of great interest and value to all scientific photographers will be presented. The Biological Photographic Association was formed nine years ago to act as a clearing house for new ideas in scientific photography. The organization publishes a quarterly journal which is supplied free to members and they also conduct an authoritative question and answer service for members. Further information about the Association or the Convention may be obtained from the Secretary of the Biological Photographic Association, University Office, Magee Hospital, Pittsburgh, Pa.

Columbia's Camera Club recently honored the now famous Mark Kauffman, high school student whose photograph of Mrs. Eleanor Roosevelt was published on the cover of Life Magazine. Each Monday night at 9:45, this camera club of the airways broadcasts its meetings over the Western network of the Columbia Broadcasting System. Meetings are conducted by Maurie Webster and western camera fans will find these broadcasts interesting and instructive.

The Lakeland Camera Club, of Lakeland, Florida, recently celebrated its first birthday. This active group is anxious to communicate with other camera clubs and communications should be addressed to Ruth Clifford, Secretary, at Route 1, Box 75, Lakeland, Fla.

Mr. H. K. Shigeta, of Shigeta-Wright, Inc., Chicago, Ill., photographic illustrators, was recently honored by receiving a bronze medal of merit from the jury of the Tenth International Salon of Photographic Art of Brussels, Belgium.

The Miniature Camera Club of Philadelphia will hold an Outing at Ship-Bottom, New Jersey, on July 16th. The club's members will enjoy all the pleasures of the beach and, of course, shutters will be clicking merrily. The event was a tremendous success when held last year and a big attendance is expected.

The First Annual Exhibition of Photographs of Wild Life will be held in the galleries of the American Humane Association, 135 Washington Ave., Albany, New York, from October 16th to 29th. The exhibition is sponsored by the New York State Nature Association and \$35.00 in prizes will be awarded the three prints that best represent the spirit and beauty of birds and animals photographed in their natural environment. Closing date for entries is October 7th. Prints should be sent to Miss Alice Morgan Wright, 393 State St., Albany, N. Y.

A series of programs of travel pictures in color are being presented during July and August at the Community Playhouse, Western Women's Club Bldg., 609 Sutter St., San Francisco. The programs are sponsored by the University of California, Extension Division.

\$125.00 in cash awards will be made in a contest for the best industrial, agricultural or scenic photographs of the State of Kansas. Closing date for entries in this "Know Kansas" Contest is September 1, 1939. Complete information and rules may be obtained from the Dept. of Information, Kansas Industrial Development Commission, State House, Topeka, Kansas.

The Second Series of Interclub Competitions, sponsored by the Manhattan Camera Club, 310 Riverside Drive, New York City, will begin this fall. Only four competitions will be held during the 1939-40 season, as contributing clubs found the monthly schedule too strenuous. The new contests will be open to all prints and no special subject will be assigned. Closing dates for the four contests will be: Oct. 31, 1939; Dec. 31, 1939; Feb. 29, 1940; and April 30, 1940. The Manhattan Camera Club also wishes to extend a cordial invitation to out-of-town visitors to attend any of their meetings. Phone Mr. Martin Polk, Algonquin 4-4800.

The Oval Table Society, Inc., of New York City, recently exhibited a selection of their members' work in the Eastman Kodak Gallery of Light, at the New York World's Fair. The Oval Table Society is composed of famous photographers and this show gave visitors an opportunity to see the originals of many famous prints.

The Baltimore Camera Club, of Baltimore, Md., is now making plans for permanent club rooms. The group expects to be established in their new quarters by next year.

The Telephone Camera Club of Washington, D. C., is holding its Annual Picnic and Outing on July 22nd. The club has chartered a 63 foot boat and the members will enjoy a photographic cruise. It is reported that a large number can be comfortably accommodated and that members may bring guests

so Washington, D. C., photographers should look for club members among their friends.

The North Shore Photographic Club, of Evanston, Ill., a recently organized group of photographic enthusiasts, will welcome correspondence from other similar groups. The club also extends an invitation to other camera club members to visit their meetings, held at 8 P.M. on alternate Wednesdays in the penthouse of the Orrington Hotel. Correspondence should be addressed to William Riley, Secretary, The Orrington Hotel, Evanston, Ill.

Cash prizes will be awarded by the French Government Tourist Bureau, 61 Fifth Ave., New York City, for the best photographs taken anywhere in France, during the period from June 15th to December 31st, 1939. Complete rules and entry blanks may be obtained from the above address.

Notes and Comments

Forty new model watches, with 17-jewel movements, will be the prizes in a series of photographic contests announced by the Elgin National Watch Co., Elgin, Ill. Ten watches are being given away each month, from June through September, for the best amateur photographs taken in or at the Elgin Building at the New York World's Fair. Complete details and entry blanks may be obtained from the Elgin Company or at their building at the Fair.

The Photo League, 31 East 21st St., New York City, has announced a series of courses under the direction of famous photographers. Tuition for each course is \$5.00 and admission to any lecture 75c. Some of the well known photographers acting as instructors are: Robert Disraeli, Alfredo Valente, Eliot Elisofon, Barbara Morgan and Henry M. Lester. A catalog outlining the courses available will be supplied upon request.

The manufacturers of Ray-Del Developer have announced a contest for all photographers. Any photograph that depicts Balance in some manner, shape or form is eligible. Cash prizes will be awarded and the closing date is November 1, 1939. Complete details are available from The Contest Editor, Raygram Corporation, 425 Fourth Ave., New York City.

The Raven Screen Corporation is proud to announce that the screens used in Eastman's famous Hall of Color are produced by their company. Eleven screens, 17 x 22 feet, were made for the "Cavalcade of Color."

The Perflex 1-2-3 Speed Binder is a new type of 2x2 inch slide binder now being marketed by the Candid Camera Corporation of America, 844 W. Adams St., Chicago, Ill. The binder is an accurately die-cut piece of metallic surfaced paper into which are set two pieces of glass. As the binder is all in one piece, it is but a few seconds work to complete the slide.

The Economy Model Daylight Film Winder is an ingenious device that will enable 35mm. fans to load their film magazines in

daylight. The winder holds 50 feet of film and uses discarded film magazines for reloads. It is equipped with a counter that registers the number of exposures wound on the spool. Price is \$3.60 and complete details may be had from the manufacturers: W. W. Boes Co., Dayton, Ohio.

A large exhibit of Gevaert Gevalux Velour prints are being shown in the Turkish Pavilion, at the New York World's Fair. Photographers will find this an exhibit of unusual interest.

Ultra Fine Grain Developer W 655, compounded according to the "Hans Windisch Formula" described in the book the "New Photo School" is being distributed in the U. S. by the Intercontinental Marketing Corp., 8 West 40th St., New York, N. Y.

The Stereo-Tach is a new camera attachment that enables the photographer to take three dimensional pictures with his own camera. This device is attached to the front of the lens of any camera and produces a pair of photographs on one film with a single exposure. Complete details may be obtained from the Commonwealth Mfg. Corp., 4206 Davis Lane, Cincinnati, Ohio.

The Eastman Kodak Company announces that the new processing plant now under construction in Hollywood, Calif., will bring the Pacific Coast increased service in the processing of Kodachrome film. The new plant is expected to open in the early fall. It will inaugurate a processing service for 35mm. Kodachrome in the West.

Duplicate transparencies in color may now be made from 35mm. Kodachrome originals. This new service also offers enlarged duplicates up to 11 x 14 inches. If all originals are the same size, the duplicates may be reproduced in sequence on film strips. For complete details and price lists on this service see your local dealer or write the Eastman Kodak Co., of Rochester, N. Y.

Eastman Tri-X Panchromatic, a new professional film of extreme sensitivity, has just been announced by the Eastman Kodak

Co., of Rochester, N. Y. The new film is more than seventy-five per cent faster than Eastman Super-XX and it is almost as fine-grained as Eastman Super-XX Professional Sheet Film. Eastman Tri-X Panchromatic offers the long scale and soft gradation preferred by both portrait and commercial photographers.

Agfa Twin Eight Hypan Reversible is a new cine film made especially for all Double 8 cameras. The new film is three times faster than Agfa single 8mm. films and combines exceptionally fine grain and brilliance with very high speed. Made by the Agfa Anso Corporation, of Binghamton, N. Y., the new Twin Eight Hypan Reversible film is supplied in 25 foot spools for \$2.25, which includes processing at any authorized Agfa laboratory. Agfa has also introduced a new 16mm. high speed film which is four times faster than Agfa 16mm. Superpan Reversible. The new film, Triple-S Superpan Reversible, is ideal for indoor and outdoor night scenes and for sport pictures under poor lighting conditions. Triple S Superpan Reversible is available in 50 foot lengths for \$3.25, which includes processing.

Four new Rollei Filters have been placed on the market by Burleigh Brooks, Inc., 127 W. 42nd St., New York City. The Rollei Sport is a very light yellow filter which requires very minor prolongation of exposure time. The Rollei Light Green Filter gives the same, but less pronounced effect, as the usual green filter. The Rollei Orange Filter is valuable for long distances and night exposures. The Rollei Light Blue filter is designed to give better color rendition by artificial light with super sensitive panchromatic films. All filters are priced at \$5.00 in bayonet mounts and \$4.50 in push-on mounts.

The New F-R Exposure Meter is a new meter of the extinction type just placed on the market by the Fink-Roselieve Co., Inc. An inexpensive yet accurate exposure meter, it can be set for any film and also for any light condition. The F-R Exposure Meter can be used for both movies and stills as the readings show, beside the regular aperture openings and shutter speeds, also movie frames per second. It can also be used to determine filter factors. The F-R Exposure Meter will sell for \$1.00.

Helene Sanders, F.R.P.S., and Nicholas Haz, F.R.P.S., who have conducted the Haz-Sanders School since September, 1938, have decided to continue their work separately after October, 1939. Nicholas Haz will inaugurate a "Home Study Course" of picture visualization and analysis, in the near future. Mrs. Sanders will continue her courses in Portraiture and the Technique of Photography in her own Greenwich Village Studio, in New York City.

Movie Fax has been selected as the permanent name for the new house organ published by the Hollywoodland Studios, of South Gate, Calif. The Hollywoodland Studios, who specialize in film for the amateur movie fan, were very pleased with the popular acceptance of their informative publication. Movie Fax is mailed free of charge to all customers of the Hollywoodland Studios and it features a monthly prize contest for the best scenario submitted.

The new Bee Bee Chi me-Tripod, introduced by Burleigh Brooks, Inc., 127 W. 42nd St., New York City, comes packed in a handy tubular container that makes an excellent carrying case. The tripods are made for long wear and durability and are very reasonably priced, in three sizes, ranging from \$2.75 to \$5.00.

A complete price list of color materials has been prepared by Willoughbys, 110 West 32nd St., New York City, and will be sent to any photographer interested, without charge. Willoughbys have also prepared a 16-page catalog showing amateur and professional exhibition mounts and folders.

Normand Photo Service will open a new photographic store at Shattuck Ave. and Center St. in Berkeley, Calif., on July 24th. The new store, offering complete photographic service, will be one of the largest exclusively photographic establishments in Northern California. Normand's will be decorated in modern style and arranged to give the customer the maximum in friendly, efficient service. An elaborate finishing plant will also be installed and Normand's will feature a custom fine grain developing service. This custom service will finish 35mm. films with the same care and consideration a photographer would give his own films. Mr. Bland H. Casebolt, well known California photographer, will be in the new store to give customers the benefit of his knowledge and experience. A few of the many services Normand's will offer are a display of salon prints, a modern projection room, and a custom print service.

A complete photographic directory will be found in a new catalog being prepared by the L. A. Camera Exchange, 1037 S. Olive St., Los Angeles, Calif. The new catalog will soon be ready for distribution and copies will be sent free upon request.

The Leudi Exposure Meter, distributed by the Mimosa American Corp., 485 Fifth Ave., New York City, is now supplied with a durable bakelite case, which contains the abridged instructions for operating the meter pasted to its insides. Thus, these instructions are handily and immediately available to the operator. The Leudi Exposure Meter sells for the same price, \$2.15, with the new carrying case.

The Rabinovitch School and Workshop of Photography, 40 West 56th St., New York City, is now mailing a new 32-page catalog to those interested. The school is also accepting applications for Fall classes. Applications should be sent in at once as the size of classes is limited because every student receives the benefit of personal instruction from Rabinovitch, himself. Print exhibitions are continuously displayed at the School and visitors are welcome.

New Weston Film Ratings for your Weston Exposure Meter are now ready. A complete up-to-the-minute listing, the data is presented in a neatly tabulated folder. Copies may be obtained free of charge by writing the Weston Electrical Instrument Corp., Newark, N. J.

A new building has been acquired by the Wollensak Optical Co., 850 Hudson Ave., Rochester, N. Y., to take care of their rapid-

ly increasing business. The new plant has about 40,000 square feet of floor space and will be used to house the offices, mechanical manufacturing, and shipping departments, leaving the parent plant to be turned over entirely to the manufacture of lenses. The Wollensak Optical Company not only specializes in the making of fine lenses but also manufactures a complete line of fine optical instruments.

The New Leica Synchronized Flash Unit Model VI has just been announced by E. Leitz, Inc., 730 Fifth Ave., New York City. By means of an ingeniously designed base-plate, synchronization is effected by the mechanism of the camera itself and there are no external synchronizing heads, devices or connecting wires required. The unit is priced at \$28.50.

Today's Candid Story is the title of a series of radio programs sponsored by the International Research Corporation, of Ann Arbor, Mich., manufacturers of Argus Cameras and accessories. See your local newspaper for broadcasting times or write to the Educational Department at the above address.

Karl A. Barleben, F.R.P.S., recently began a series of lectures on "Modern Photography" that will carry him from coast to coast. Mr. Barleben is Educational Director of the International Research Corp., of Ann Arbor, Mich., manufacturers of Argus Cameras. Details on the time of his appearance in your city may be obtained from the above address.

Your shutter can be tested without charge at the New York World's Fair by the Universal Camera Corporation, manufacturers of Univex Cameras. This service is part of their exhibit at the Fair and photographers will find much more of absorbing interest in this display.

The Filmorator is an accessory to be used with the Bausch & Lomb Film Slide Viewer. It holds a strip of 35mm. film in such a way that damage is impossible and it has a button by which the film may be moved exactly one frame at a time. The Filmorator is a great aid in examining 35mm. negatives. It is priced at \$3.00 and complete details may be obtained from the Bausch & Lomb Opt. Co., Rochester, N. Y.

Our Book Shelves

Photography by Infra-Red, Its Principles and Applications, by Walter Clark, Ph.D., Kodak Research Laboratories. Published by John Wiley & Sons, New York. 397 pages, 6 x 9½ inches, 103 figures, including many photographs, cloth bound, \$5.00.

This excellent and timely book on the fascinating subject of infrared photography should be in the library of every serious photographer. While primarily written for the intermediate and advanced photographer, the beginner will find much of value in its pages, as the book is replete with information useful to those just starting infrared photography or to those photographers who have already done some work in this interesting field. There are 16 chapters of unusual thoroughness, covering very completely the whole range of the subject. They include an exceptionally good history of infrared photography, lists of all makes of infrared film and plates with their sensitivity range, all makes of infrared gelatin and glass filters with their spectral transmissions and uses, 44 pages on sources of infrared radiation, and much information on focusing of lenses for infrared photography. Practical applications include examination of textiles, paintings, documents, medical photography, criminology, photomicrography, landscape, aerial, total darkness photography, astronomy, botany and paleontology, and penetration through fog and haze.

The book has also much material of value to the general photographer on methods of technique, color temperatures of many artificial illuminants, spectral intensities of the new high intensity mercury vapor arcs,

hypersensitizing plates, etc. One of the features of the book is the very complete bibliography at the end of each chapter. The author has a very clear style, and while the book is mainly from the practical viewpoint, plenty of theory is given to guide the photographer along intelligent lines so that he is not working by rule of thumb. The only minor criticism some practical photographers might have to the book is the inclusion of too many curves and data on the characteristics of photographic materials. The inclusion of the complex chemical constitution of the dyes for sensitizing infrared plates and films seems to be out of place in a practical book of this kind.

GEORGE H. NEEDHAM.

The Curtis Color Handbook, by Thomas S. Curtis, Sc. D. Published by the Curtis Laboratories, Huntington Park, Calif. 96 pages, 5½ x 8 inches, illustrated. Cloth bound \$1.50, paper bound \$1.00.

Though this book was prepared mainly for the users of the Curtis Color-Scout, a one-shot color camera using film packs, it holds much of value to every color photographer. Throughout the book, the author drops practical hints, that save time and money and could only be learned, otherwise, through long experience.

Complete instructions are included on the care and use of the Color-Scout. Negative materials are discussed and exposure is fully considered. Next, the author describes the color darkroom offering many of those practical hints and suggestions we mentioned above. Negative development is completely explained with the author's own recommended developers.

One of the most important sections of the book are the chapters on the Curtis Color printing processes, the Neotone and Orthotone Processes, which are explained in detail.

The book is a valuable contribution to color photography and can be recommended to all serious color workers.

Photo-Lab-Index, by Henry M. Lester. Published by Morgan & Lester, of New York City. 300 data sheets, cloth loose-leaf binding. Price \$3.50.

We suppose that you are one of those systematic photographers who has time for everything and has his darkroom data neatly filed and ready for instant reference. However, if you are not one of these rare creatures, and have a drawer full of miscellaneous clippings, a haystack in which you are always hunting the pin, then this publication will be the answer to your prayers.

It contains all the data you need for darkroom work neatly compiled and arranged for quick reference. Let us list some of the material in these pages: all formulas and recommended procedures for Agfa, Dassonville, Defender, Dufaycolor, Dupont, Eastman, and Haloid materials; Time-Gamma-Temperature Charts; data on all makes of photographic lamps; data on the sensitivity of photographic papers; weights and measures and conversion tables; and much other important data.

All of this may cause you to protest that this is only good for a short period, after which it will be outdated. This is not the case, for subsequent releases of data sheets will keep your Index up-to-date and the original purchase price includes the first two releases without charge.

Other binders and blank pages are also available for future issues and your own pet formulas and notes.

All in all this is something we have needed in the darkroom for a long time and we are pleased it has been presented in such a fine manner and with such foresight.

The Camera In Commerce, by David Charles. F.R.P.S. Published by the Pitman Publishing Corporation, of New York City. 104 pages, 7 x 9½ inches, illustrated. Cloth bound, \$3.00.

A book for the commercial photographer designed to show him the way to more business through the medium of improved technique and better methods. The author, quite properly, assumes that the reader can already take photographs and therefore he concentrates on the fine points of technique that will make better photographs with appeal for the customer.

Amateur Film Making, by George H. Sewell. A.R.P.S. The Chemical Publishing Co., of New York City. 114 pages, 5 x 7 inches, illustrated. Cloth bound, \$1.50.

A book for the beginner in cinematography. The author has assumed that the reader has no experience whatsoever with his medium but has just purchased his first camera and film. It covers its subject from beginning to end in simple, easily understood language and it will give the novice in motion picture photography a good foundation on which to proceed.

So You Want To Take Better Pictures, by A. P. Peck. Published by the Scientific

American, of New York City. 209 pages, 5 x 8 inches, illustrated by line drawings. Cloth bound, \$2.00.

A book written for the snapshooting camera owner, who does not plan to develop and print his own pictures. It deals simply with all the problems of taking pictures, indoors and outdoors, with and without artificial light. The author also offers many ideas and suggestions about what kind of pictures to take and where to find them.

After-Work On Negative and Print, by R. M. Faustone, A.R.P.S. Published by the Fountain Press, of London, England. 56 pages, 4¾ x 7¼ inches, illustrated. Paper bound, 75c.

This is No. 11 in the New Photographer Handbook Series. It deals mainly with intensification and reduction and with retouching. Both negatives and prints are considered and the instruction given is presented in the usual clear, understandable manner always found in these handbooks.

Answers to "What Is Your Photographic I. Q.?"

1. True. Too powerful a light source causes increased flickering and may necessitate higher-than-normal running speed of the projector. Rather use too little than too much light.

2. True. The sulphate of paramethylaminophenol is the chemical name for metol. Try buying it from your photographic dealer under this name!

3. True. As a general rule average distant exposures will require only one-half to one-fourth as much exposure as average near views. This because there are no large dark shadow masses in a distant view due to the diffusion and reflection of light.

4. False. Contrary to the practice followed with black and white films, Kodachrome should be kept in cans in which no moisture is present.

5. False. A ten per cent solution is made by mixing one ounce avoirdupois for each 9½ fluid ounces.

6. True. To compensate for the lack of sufficient contrast a "hard" paper or one that will give a degree of contrast above normal should be used. Of course the opposite is true for a contrasty negative.

7. False. A finished positive cannot be reversed chemically to a negative. The reversal process would have to take place after the first development and without fixation.

8. True. Try this experiment: Place a glossy black paper next to a matte black and compare the difference. Briefly what happens is this: On glossy paper the surface reflection takes place for the most part in one direction, namely, away from the eye. On matte paper there is a greater diffusion of light from the paper to the eye.

9. False. In the early morning or in the late evening the light generally tends toward yellow to red.

10. False. Photographers consider the extent of an enlargement in terms of linear enlargement. Consequently, a 4" x 5" to 8" x 10" is referred to as a two time enlargement. The more correct expression would be "two times linear."

CLASSIFIED ADVERTISEMENTS

Rate: 6 cents a word; minimum \$1.50 each insertion, prepaid.

Items advertised in these columns may be purchased C.O.D. subject to examination and C.O.D. subject to ten days free trial if sent by express. If in doubt, safeguard yourself.

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◆Sacrifice factory overhauled 3/4x4 1/4 RB Tele Graflex with 7 1/2" Kodak Anastigmat f:4.5, film pack adapter, new cut film magazine \$65. Money back guarantee. Gill Studio, Oil City, Pa.

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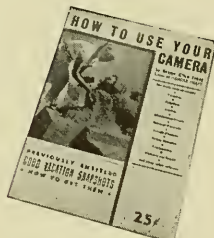
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"Sand Dunes—Oceano, 1930"

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"Rose Covarrubias, 1926"

Edward Weston

Thirty-Five Years Of Portraiture

Edward Weston

Part I

PART I.

(Part I of these articles covers the years 1904-1934. Portraits used to illustrate it were made between 1924 and '27. The four heads were made out of doors with a $3\frac{1}{4} \times 4\frac{1}{4}$ Graflex fitted with a Verito lens. Heads of Guadalupe, Diego Rivera, and Rose Covarrubias, were printed glossy for reproduction from enlarged negatives. Head of Cole is a browide enlargement. The two figures were made by daylight indoors with an 8 x 10 camera fitted with an anastigmat lens. The figure of Johan Hagemeyer is a glossy contact print; the figure of Rafael Sala is from the original Palladiotype. With the exception of the picture of Rafael Sala, which was a case of conscious placing, the approach in all of these examples was, in today's vocabulary, candid.)

WHEN I was sixteen years old and had mastered the workings of my first box camera, I began to try to make photographs that would express my feeling for the thing before my lens, rather than just record its facts. My first ventures in this vein were landscapes made in the Chicago parks, but these were soon followed by attempts to portray my friends. I found as most beginners do that my friends usually felt I had done them grave injustice.

The portraits that did meet with approval were invariably those done out of doors in the shade. But my meniscus lens was slow and plates were slow; working in the shade meant time exposures. I had been born too late to fit into the head-rest period, and although I had no need to stop fast action, I did want spontaneity. A lens catalogue started me thinking and saving. Before many months had passed I had a camera fitted with an anastigmat lens which had the amazing aperture of $f:4.5$. One could actually make $1/25$ second exposures in a diffused light at noon!



"Johan Hagemeyer, 1925"

Edward Weston

About this time I went West on a two weeks' vacation and decided to remain in California. Jobs were infrequent, money needed, so I turned to my camera and canvassed house to house in the little village of Tropic, making postcards for a dollar a dozen—family groups on the porch, children, pets. I was still in my teens and had not yet decided on a career. In Chicago I had worked in a wholesale dry-goods house, in California I had punched stakes with a surveying crew. I can't recall now whether the idea was a sudden one or had built up gradually, but I decided that I would be a portrait photographer.

I had already had considerable experience. I had improved my technique and seeing by reading the "Camera Crafts" of the time, and I had essayed artistic portraits and even genre studies. When some of these were published I thought I must certainly be on the road to success. Nevertheless it seemed to me there must be professional secrets still to learn before I hung out my shingle; and of course I must have a diploma—one such as my dentist had in his reception room. I believed the latter would help me get the job which was to be a necessary prelude to having a studio of my own.

A certain midwestern college of photography, now defunct, offered a diploma within six months to exceptionally bright, industrious students.



"Rafael Sala, 1924"

Edward Weston

I had already paid the six months' fee when I learned that the only way to get a diploma in that time was to pay for the year's course. Knowing that I was stung, that I would never have the coveted diploma, I satisfied my outraged feelings by telling the president-owner that he was a liar; then I went to work to get all I could for my money.

The *operating room* (why?) was under the direction of a genial instructor whose specialty when he was in a creative mood was *johnray* (genre) pictures. I received my first of many shocks on the opening day when an advanced student was called on to make a sitting. An adolescent youth stepped forward briskly, tilted the model's head and braced it with a head rest, screened it to a nicety, then drew himself up solemnly and hissed "Look pleasant please."

I was young but I knew better. I realized at once that I had come to the wrong place. The whole procedure revolted me: it was an outrage to the sitter. I can still recall the sickly grin that parted the girl's lips. In the next six months I learned a lot about what not to do when making portraits, and I learned darkroom technique from a good teacher. Then I returned to California to get a job.

After some days of walking the streets of Los Angeles, going from studio door to gallery stairs, I realized that the mourned diploma would have been no asset. I learned never to mention my college career. Jobs were given solely on the merit of the work the applicant could show.

I thought I was in luck when I was finally hired at \$12.00 a week by a high class studio with a showcase full of gold medals. But my elation decreased when I learned that my duties were to consist of dusting frames and cleaning celluloid for carbon printing. I felt my ability was being underestimated; I was impatient to be doing and learning; so after two weeks of it I quit and set out to make the rounds once more.

Within a few days I had another job and this one lasted. I spent two years in the darkroom and came out knowing how to print on D.O.P. (and do it in a hurry, or work all night.) I learned a good deal about portrait lighting by printing from badly lighted negatives, and in spare time I was allowed to use my boss's operating room (that awful name again) which added to my practical experience.

By the time I opened my own studio I had had a fair amount of practice and done a lot of observing. I was sure I would never commit such offenses as twisting my subject's neck awry, or saying "Look pleasant please." But as I look back, I realize I did other things that were just about as bad: posing by command: ("look up, Miss Jones; now turn the head this way"), arbitrarily placing hands for effects of grace and elegance, using chiffon drapes, etc. And I had a vignetter handy which I used to cut off a too prominent bust, dissolve an awkward shoulder line, or otherwise dispose of things I did not know how else to manage.

The light source in my studio was a conventional 45° skylight, and I started out with all the apparatus—head screen, reflector, diffusing curtains, opaque curtains—that went with a well equipped gallery ("studio" was a later refinement) of the time. My 11 x 14 camera had a reducing back to hold 8 x 10 plates on which I made two exposures. The camera was enormous, the lens looked like a small cannon; a sitter facing it must have



"Diego Rivera, 1924"

Edward Weston

felt he was under fire. But for a camera of that type it was as flexible and quick to manipulate as any I could buy and equip.

My early experience in "college," and later in observing my employers' ways, had convinced me that my sitter must be put at ease; must at all times be as nearly as possible unconcerned with proceedings; must be—if possible—unaware of the exact instant of exposure. And to this end I knew that all excess activity must be eliminated from camera manipulation. It will be surmised from the above description of my equipment that I had obstacles to overcome if I wished my sitter to feel at home; but although this outfit sounds pretentious, it was not nearly so formidable as that of most of my contemporaries. I found that conversation could be used to disarm the sitter, to keep his mind off my actions and his appearance. In time, as I became more expert in this field of applied psychology, I could often make several exposures before my subject was aware of it. But handling this large camera and keeping a sitter under control while it was being manipulated was a task physically and psychically wearing. I would be exhausted after a sitting, for I was very much in earnest and would often work for several hours making 12 and sometimes 18 exposures.

Early in my professional career I gained a reputation as a photographer of children. The problem presented by their proclivity for constant action led me to try out flashlight. I bought a device in vogue at the time which consisted of a flashpan mounted on an adjustable metal tripod, the flash trigger synchronised with the camera shutter. The flash pan and the rod supporting it were concealed in an enormous cloth bag, the mouth of which tied at the tripod head. One side of the bag was made of semi-transparent cloth and disguised to look like a 45° skylight, and the whole thing stood upright like a captive balloon. After the flash, which completely unnerved my young victims and even startled me, I would remove the bag and empty the smoke out of the window, to the consternation of my neighbors and innocent bystanders. This horror-bag, my first experiment in stopping movement, was soon abandoned.

About 1912 I had acquired a Graflex. (Aside from the occasional commercial speed jobs that came my way, I had to be prepared when some reckless daredevil wanted to be done at the wheel of his Model-T-Racing.) One day after trying unsuccessfully to keep an especially active child in focus with the 8 x 10, I resorted to my Graflex. From that time on I used the smaller camera for children even though it meant making many enlarged negatives, since most of my work then was finished on 8 x 10 platinum. Gradually I began to use the Graflex for older subjects when they were nervous, restless, or otherwise hard to control, but it was not until I moved to Mexico City in 1923 that I began to use it for portraiture exclusively. My sittings there were mostly from the Spanish-speaking population and my Spanish was anything but fluent. Since I had come to depend on casual conversation as a means of disarming my sitter, this lack of language was a great handicap. I couldn't hold a sitter quite long enough with the studio camera: by the time I had focussed, closed the shutter, placed the holder, the right moment was gone. The Graflex gave me just the needed increase in working speed. When I left Mexico I left my studio camera behind. And with that camera I also left behind platinum



"Guadalupe—Talking, 1924"

Edward Weston

printing and negative enlarging. I was broke, unsettled, and Palladiotype was expensive, did not keep well, and took five or six weeks to get since it had to be imported from England.

Some years before the war I had acquired a brass mounted Verito—possibly the first soft focus lens in professional use on this coast. At first I swallowed the idea with all the enthusiasm of one who saw retouching lessened if not eliminated, saw pleased patrons and increased sales. And I soon began to use it for my personal pictorial work. I sent 16 x 20 platineums, printed from enlarged negatives made with the Verito, to the London Salon. In 1917 I was elected to membership, and to the company of such distinguished Americans as Clarence White, Gertrude Kasebier, Wilbur Porterfield, Yarnall Abbott, Rudolph Eickemeyer, Spencer Kellog. The honorary secretary pronounced my entry the best group in the salon. I do not write boastfully for I am writing of another person: all this is but a memory. But at the time I was elated. More salon honors followed—medals, cups, professional awards, even an editorial in the Los Angeles Times! I had arrived!

But had I? The day of glory was a short one. Within a few years I had stopped sending to the London and other salons. I knew that my new work would not be acceptable, that I would waste my time and the juries by entering it.

Then came a rift between my own work and my portraits; the soft focus lens remained a part of my portrait equipment long after I had discarded it for my other work. The sincere enthusiasm with which I adopted it at first is in some respects difficult to explain. I was never a frustrated painter; my interest in photography had always been based on the unique qualities of the medium. (I had tried gum prints, then popular, and rejected them at once.) I think one of the main reasons for my adoption of the soft focus lens was my lack of technical ability at the time. Just as at an earlier date I had used a vignetter to remove imperfections I had not learned how to avoid, I then welcomed a lens whose diffusion would hide the detail I could not handle.

Our own vision is automatically selective: we see what we want to see. It is a long job for the photographer to train his eye to lens-sight, and then learn to use that indiscriminating lens-sight selectively to suit his purpose. This is not an apology. I still like some of my work of the soft period—when not too soft. After the first debauch I usually stopped the Verito down to f.11 or smaller. Even now for landscapes I like the quality of the single element Protar which has not the critical definition of a Tessar doublet, and for portraiture I use a Meyer Plasmal for like reasons.

I continued to use the soft focus lens for portraiture for purely economical reasons. Portraiture had to support me if I was to do the work in photography I wanted to. It was not the time to quarrel with my bread and butter. Bread-and-butter reasons also kept me retouching my professional portraits until 1934. I was a good retoucher, expert enough to flatter a sitter into actually believing he looked that way. I would spend hours on one negative, working so carefully that almost no trace of the pencil remained. At the same time I was careful to preserve modelling. After I abandoned the old studio camera, I made negatives with a sharp



"Cole, 1927"

Edward Weston

lens on $3\frac{1}{4} \times 4\frac{1}{4}$ film and enlarged them to 8×10 with the soft lens, stopped down just short of being sharp. The illusion was complete; the retouching disappeared.

From the time I left Mexico in 1926 until 1933 all of my professional portraits were made that way and printed on matt paper. But during that time I was constantly campaigning for the kind of portraits I wanted to do: unretouched contact prints on glossy paper. I preached unretouched portraits to everyone who came for a sitting, and sent only unretouched ones to exhibits. It was a long fight but my propaganda finally brought results. Gradually more and more people came to me who had seen my unretouched portraits in exhibits, and almost invariably they came with the same complaint: "I had a set of excellent proofs from the Blank Studio, but when the finished prints were delivered they were so retouched there was nothing left."

In 1933 I had reached the point where 75% of my orders were for unretouched prints. The other 25% were a rattling skeleton in my closet. I put the negatives away where I wouldn't have to see them but I knew they were there. I was tired of preaching one thing and having to practice another. Every order I retouched made me a little more desperate.

Then one day a rather unattractive couple came in and asked for portraits, specifying that they wanted to look beautiful and handsome. I retouched the negatives before I showed proofs; the man and wife were pleased with them and gave me a good order. Then, without even realizing the proofs were already retouched, they proceeded to enumerate the things they wanted taken out! And what they wanted out was precisely everything.

It was a \$400 order. I removed everything from the negatives as instructed, and when I went into the darkroom to print, the sight of them made me physically sick. It was then I decided what the \$400 would be used for. The couple seemed a little startled when they first saw the finished prints, but after a lengthy inspection decided they liked them and gave me a check. I cashed it at once and the next day ordered the 4×5 R.B. Auto Graflex fitted with an $f.5.5, 10\frac{3}{4}"$ Meyer Plasmat lens which I have used for portraiture ever since.

As soon as possible I had a row of 4×5 contacts hung on my studio wall, opposite a row of 8×10 s. To my joy I found an almost unanimous expression of preference for the small ones. I found plenty of people who were tired of big portraits, thought them vulgar, didn't like to give them to friends, saw no place for them in modern homes and apartments. This encouragement was all I needed. Soon there were glossy contacts in my showcase with a sign reading UNRETOUCHED PORTRAITS.

There was a pleasant epilogue to the horror-order that bought my Graflex. A few weeks after the retouched-to-death prints had been delivered, the man wrote to tell me none of their friends would have the pictures. I answered immediately saying I would be glad to give them another sitting free of charge and \$400 worth of prints free of charge—unretouched contact prints on glossy paper. My letter was never answered. *(The second half of this article will deal with my present way of working, technical problems, etc., with examples of work from 1934 to the present.)*

Lighting Interiors

William Clifford Hedrich*

A ROOM has a personality too. These personalities, like their much less docile homologues, the human personality, must be studied before the photographer can depict them. An architect or designer, in creating an interior, strives for a certain individuality keyed to the persons by whom the room will be used. It is the photographer's job to portray the mood of the interior as visualized by its creator or as made by years of association with its occupants.

Accurate interpretation of a room is dependent on three factors: (1) Proper lighting. (2) Selection of subject matter. (3) The angle at which it should be shown.

By far the most important of these factors is proper lighting. It controls mood, definition of detail, depth, point of interest and, to some extent, composition. Good lighting can compensate for unfortunate angles and make almost any subject an interesting one. With faulty lighting, however, good results cannot be achieved, despite possible excellence of subject matter and perspective.

A room is tri-dimensional. The photographer, through lighting, must maintain this feeling of depth on a two-dimensional print. Contrasts between foreground and background, between adjacent planes, between objects and their setting and where patterns and textures are shown, give a room the depth that brings life and reality to a photograph.

Foremost of the methods of contributing the three-dimensional effect to an interior view is contrast between foreground and background. A room can be given apparent size by the use of a wide-angle lens, thus

*Hedrich-Blessing Studios, Chicago, Ill.

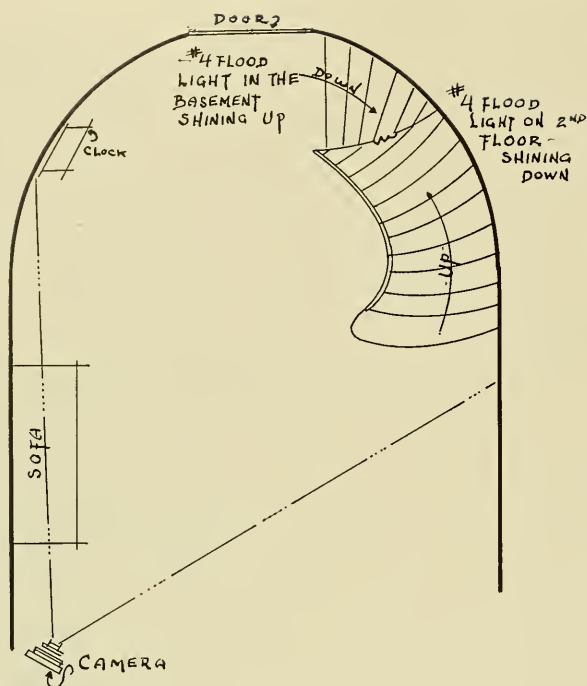


Figure 1.
Lighting Diagram
for Figure 2.

accentuating the receding lines of perspective, but real depth for this large appearing room can only be attained by contrast of light and dark elements.

Lighting, coupled with the use of receding lines, is usually used to carry the attention of the observer deep into the picture. The eye, being attracted by light and repelled by shadows, will travel the entire depth of a room to seek the brightest spot, providing that that spot is placed in the background. An open doorway with bright lights behind it, carries the eye the entire depth of the room and conveys the impression of spaciousness by suggesting further room beyond the doorway.

If the larger-scaled objects in the foreground of a room are very brilliantly illuminated, they are given much greater importance than the smaller, less noticeable objects in the background. The eye, then, is not strongly drawn past the foreground deep into the picture. I often try to work a dark form, even a silhouette, into the immediate foreground because of the added depth suggested by a sharp break from dark to light. A door frame is sometimes excellent; the graceful lines of an occasional table, or the arm or back of a chair or couch will do the trick.

Try to keep the foreground subdued, particularly if the foreground form is of light or contrasty pattern. Both balance and depth are lost when large scale objects in the foreground are rendered too prominently. Avoid a principal light source close to the foreground. If this source is placed beside the camera, its comparatively uniform distribution of light tends



Figure 2

Hedrich-Blessing Studio

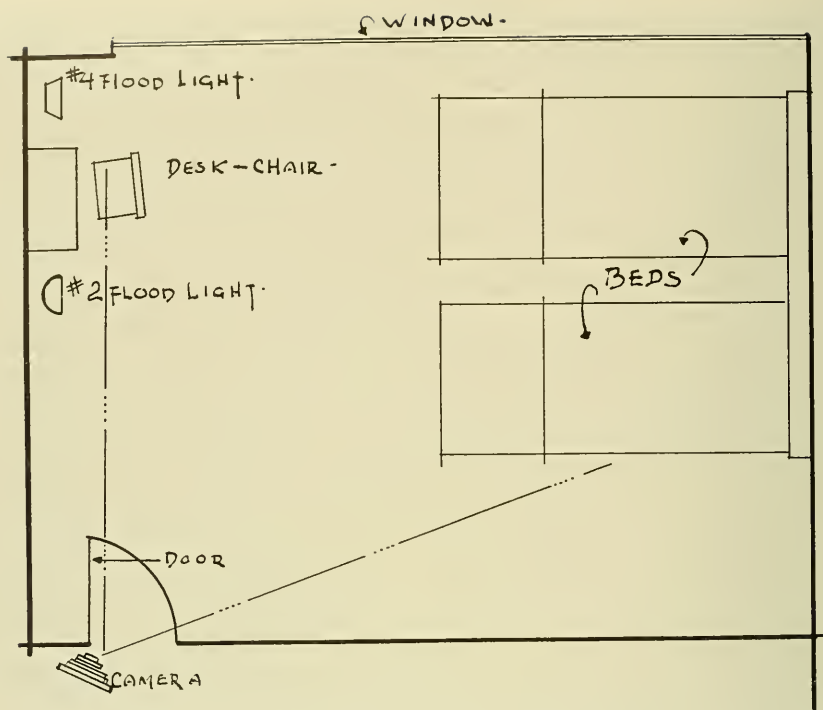


Figure 3. Lighting diagram for Figure 4. Photographed at dusk in order to pick up exterior detail. Lights are low with main source (#4 Flood) blacklighted to bring out texture in bed coverings.

to flatten the appearance of the room. By placing the light in the proximity of the background, greater contrast between foreground and background is obtained.

You do not need a tremendous battery of lights for interior work. The subject is motionless and the camera can be mounted rigidly, so you may often substitute a longer exposure for a great deal of lighting equipment. With proper exposure, two photo floods are sufficient for an average room. One light is used for source lighting; the other to contribute detail to shadows and to soften the effect.

Use a reflector behind the more powerful lighting to kill conflicting shadows and softness caused by light reflected from a back wall or ceiling onto the subject. Light from too many angles flattens the picture and causes shadows to fall in several directions. This distracts from the unity and composition of the work.

The secondary light, softer than the source light may be obtained by using one of less power than the source, by covering the reflector with a diffusing medium such as cheesecloth or tracing paper or by placing it farther from the subject than the major light.

All lighting must be considered from the standpoint of the camera angle if it is to have any validity. In general, the camera angle should be



Figure 4

Hedrich-Blessing Studio

eye level. Most rooms are too crowded with furniture for a good low-angle photograph. The large pieces in the foreground block off many in the back, chairs appear to run into each other and overlap and the rug seems completely covered. This crowded effect may be counteracted by elevating the camera angle to where it shows proper spacing of all pieces in the room.

An alternative or supplementary method of freeing the room from an overcrowded appearance, of course, is the removal and rearranging of some of the furniture. But be careful not to remove too much. A large sea of rug space in the immediate foreground is as unbalancing as a large piece of furniture. A silhouette or low piece of furniture cutting across a corner of the foreground should lessen the effect of this surplus rug space.

Remember that the camera angle is an important supplement to lighting in establishing a mood for a photograph. If the scene is old-fashioned and homey, you naturally give prominence to comfortable furniture and fixtures indicative of the desired mood. Use soft lighting with shadows full of detail. No cold fireplace for this sort of interior. You might light a wad of paper in the grate and make your exposure while it is burning.

Leave working room for the lights when planning the camera angle.

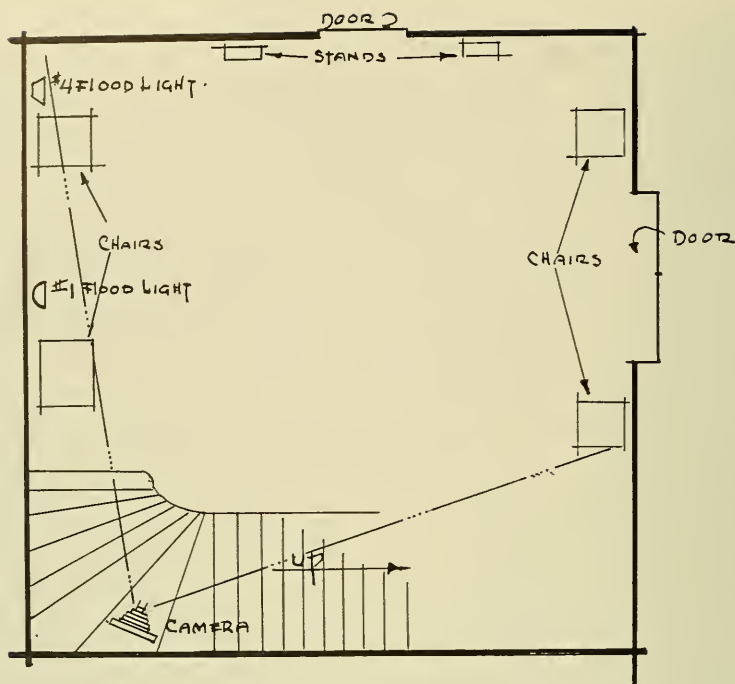


Figure 5. Lighting diagram for Figure 6. Main source of light used as back lighting to emphasize architectural detail. Wing used to keep light off ceiling.

If the extent of the room encompassed in the picture can be limited to two walls, one or two walls remain along which lights may be placed. This angle often gives a most satisfactory picture since selection of a corner viewpoint lends vitality and interest to the subject. This is particularly true when rooms have a center of interest in a corner. Converging lines formed by walls meeting the ceiling and each other, in these cases, lead the eye to the desired spot.

Except where extreme formality is sought, the camera placed in the center of one wall, squarely facing the opposite wall, shows an uninterestingly symmetrical angle.

A pleasing, natural effect results from the use of a single source for the principal lighting. One powerful flood lamp or a bank of them is probably the most convenient method of obtaining this unity in the lighting scheme.

Place your light so that it reaches each wall from a different angle in order to obtain sufficient variation in tone to define each wall. Unless you are endeavoring to suggest somberness, light up recesses and levels in the walls.

For fireplaces, recesses in the walls, doorways or archways leading into the room, and glass brick, you probably will require additional lighting equipment. Illuminate glass brick, stained glass, or other translucent ornamentation to a room, from the rear. Ordinarily daylight is satisfactory for



Figure 6

Hedrich-Blessing Studio

lighting those which are set in the walls, such as stained glass, but if you use daylight as part of your lighting aid, select a time when the light is not too strong. A foggy day, early morning and late dusk have all been used satisfactorily. If you encounter the problem of glass brick, light it with several not-too-strong lights fairly evenly distributed behind the brick.

One of the most formidable enemies of interior photography is halation. Guard against it. When photographing windows in a room, you have several defensive measures from which to select.

(1) You may stop the lens down so that the exposure required is fairly long. Take a very short exposure to register the windows and any turned-on electric lamps in the picture. Then, leaving the camera mounted in place, tack a black cloth outside the windows to shut off the light or pull down the shades so they won't show, turn off the ornamental lamps, and then complete the exposure with your own lighting. If you pull the shade down, be careful to see that the pull-cord is concealed and that the bottom edge is aligned with the window sill.

(2) You may take the photograph just at dusk when the light outside is sufficiently low to avoid danger of halation.

(3) You can place a powerful battery of lights in the interior pro-

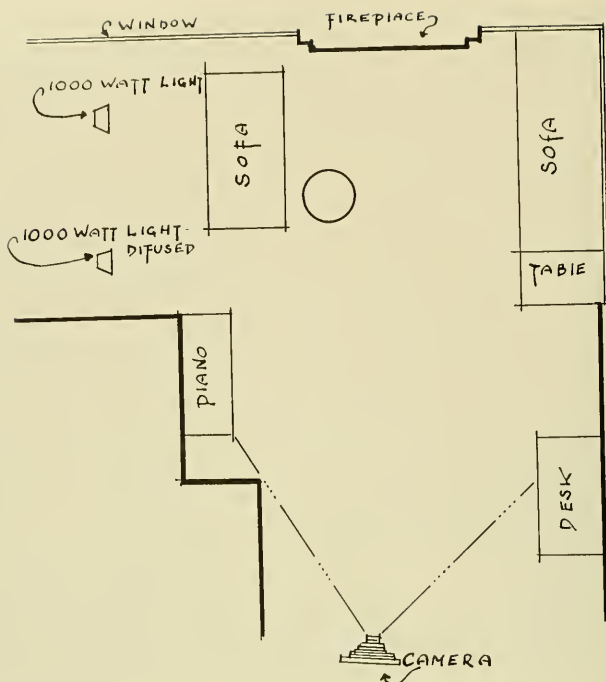


Figure 7. Lighting diagram for Figure 3. Camera on floor. Main source (#4 Flood) back lighted to catch-light drapes and fireplace. Auxiliary light used to lighten foreground.

viding that conflicting shadows do not result. If this battery is sufficiently powerful, the daylight can be counteracted by the lamps. A single exposure may then be made with the room left in its natural condition and the extraneous work may be avoided.

(4) You can reduce halation dangers by anti-halation film if it is available in a size that fits your camera.

(5) Venetian blinds are the photographer's stand-by. They permit the increase or reduction of the amount of daylight admitted into a room. The photographer, by proper manipulation, can approximate the intensity of the interior lighting to that of the windows.

In your battle against halation, don't forget the occasional possibilities of using sunlight in your prints. It is particularly effective when the rays are broken by the divisions in many-paned windows, Venetian blinds or other divided openings into the room. You will find it necessary to sacrifice some detail to obtain the sunlight in your photographs, but frequently the added beauty and naturalness of the bars of sunlight more than justify this sacrifice. Be sure to take fast exposures of sunlight.

A second ever-threatening menace to good interior photography is the unwanted reflection. Guard against reflections from bright objects in the room, mirrors, chromium, polished wood and glassware. Each re-



Figure 8

Hedrich-Blessing Studio

flection gives the photographer a spot which might be halated and which distracts the observer's attention from the principal portions of the picture.

Sometimes the reflection may be eliminated by shifting the reflected objects. At other times it is necessary to change the position of the lights. From the standpoint of both fewer reflections and more even distribution of lighting, one of the most favorable positions for the lights is high, along a side of the room not included in the print, and tilted downward.

The light furthers better definition from this position since it can reach a larger portion of the room without confusing shadows, and, more important, better balance is obtained between the usually darker carpeting and furniture and the light walls. Balance is necessary so that the walls will not be burned out while the photographer exposes for the details of the furniture, or so that the furniture will not be underexposed while the walls are properly registered.

As with every other type of photograph, try to catch the spirit of the subject. If the room and furniture are angular or "modern" make the shadows strong and the photograph contrasty. If it is a somber institution with gray granite walls, stick to a low key. The cheery, white-woodworked home is bright with transparent shadows, and the mellow old oak-beamed room should have warm, dark tones.

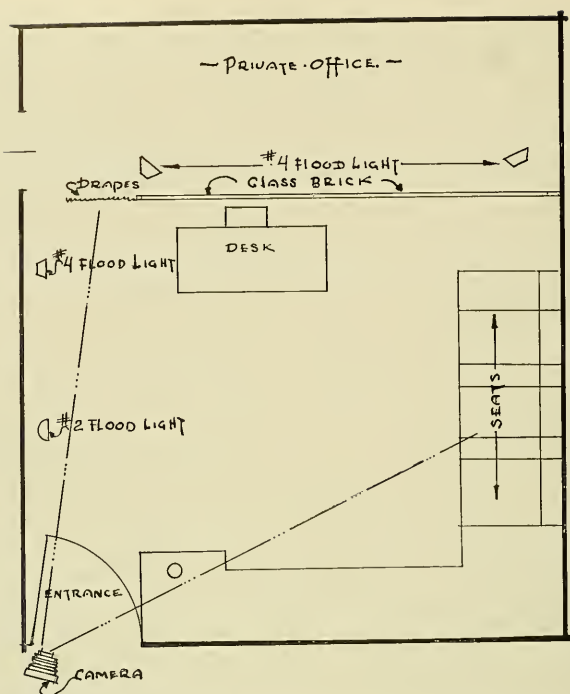


Figure 9. Lighting diagram for Figure 10. Lights in private office used to illuminate glass brick are turned away from the brick and reflected from back wall, to give even light.

Experiment with your lighting so that you can control contrast, shadows, softness, and key at will. Use stands that permit ready adjustment of lamps to any position. See for yourself how the greater the angle from which the light is thrown, the more distinctly texture is rendered; the nearer the source is to the reflecting surface, the more brilliantly the surface is registered. Practice to make each wall, the ceiling and the floor a distinct shade. Study conflicting shadows and methods of avoiding them. Learn to suggest by the selection of the simplest possible arrangement of details and by the attainment of a definite atmosphere with your lighting.

If you keep in mind the reason for taking the photograph throughout your experimentation, you will find yourself gathering knowledge far more valuable than that obtained from outside sources.

A final suggestion to the amateur who is about to take interior photographs: Learn the rudiments of electricity. If you can wire extensions, attach switches where they are most conveniently accessible, arrange wiring for flash work and understand the power limitations of your line, dangers of loose wires, amount of heat generated by high-powered bulbs and other sources of trouble and inconvenience in electrical work, you will find interior lighting, and all the rest of your artificially illuminated work, simpler and far more pleasant.



Figure 10

Hedrich-Blessing Studio

Television - - - A

Cameraman's Headache

Robert L. Pickering

BE sure to have a pair of dark glasses with you when you report to work on your first day as a cameraman in a television studio. At rehearsals of the dramatic show you are televising it won't be so bad, but when the production gets under way, you'll find the battery of overhead lights so bright that you'll need those glasses. That gives you an advantage over the actors, who not only can't wear goggles, but have to smear on purple lipstick and undergo various other makeup indignities. You'll have to learn a lot of new technique on this television job, because it's different from anything else in the world of photography. It's really a cross between radio and movies, and the most hectic hybrid anyone ever imagined.

In the production of studio "live talent" shows, the main television stations now in regular operation (in New York, NBC and CBS; in Los Angeles, the Don Lee Broadcasting System's W6XAO) utilize three studios. There is a main studio, an orchestral studio, and a special effects studio. Suppose you go to work in the main studio. You'll be one of three cameramen manning one of three television cameras. Two of these iconoscope cameras are stationary and one is mounted on a silent rubber-tired dolly.

You and your two colleagues of the camera wear earphones connected with the control room line, from which location you get prompting in regard to the right time to prepare for pan shots, close-ups, focus changes, camera angles, and dollying up or back. While your friend on Ike No. 1 is shooting a close-up, you are preparing for the next sequence and the operator in the special effects studio is getting ready to follow you with a shot of a hand pulling a trigger and discharging a gun. Watch out there! You had your mind on the special effects studio and you almost opened up on that pan shot before the assistant had moved the microphone boom out of range. You have to be careful. You're not making home movies any more, you know. And in television there isn't any cutting room.



Studio shot showing a variety turn during presentation.

Getting away from the fable of this imaginary You in your imaginary job, let's find out what is *actually* being done today in television production. The Don Lee Broadcasting Company's television affiliate, W6XAO in Los Angeles, owned by Thomas S. Lee, has been televising, among other programs, a dramatic serial for over a year. The show, *Vine Street*, was off the air for 30 days recently while the station's studio iconoscope was rebuilt to national standards for high-definition images. Now it's back in production.

At W6XAO, the camera is mounted on an arm-type dolly in a studio whose dimensions are about 25 by 50 feet. This camera was especially adapted by the Lee organization under the supervision of Director of Television Harry R. Lubeke, who has numerous basic patents on important television developments. Complete panning, tilting and elevating adjustments are quickly and easily made with the camera. It can be oriented in any position at elevations from 1½ to 6 feet from the floor. Focusing is a matter of adjusting a precision mechanism operated by a knob at the rear of the camera case. A motion picture type view-finder is utilized.

This is the equipment used in the production of *Vine Street*. The Lee organization's production and dramatic crew are combined into what is called a "dramatic unit." Television Director Lubeke finds it desirable to organize production in such units. The first step in organizing one of these units is the basic training of technicians and cameramen who have no previous experience in television. Next, candidates for the dramatic cast are interviewed. Qualifications include a capability for acting and for memorizing complete scripts, and a "type" appearance; that is, the actor must be obviously either a hero or a villain or an old man or a funny man. Next, the type of production is decided upon; one best suited to the talents of the cast and one which also meets the immediate needs of the station. At least one writer is hired. A week or two is taken for preparation of a

sample script and for occasional conferences with the television production department. Modifications and adjustments are made at a dress rehearsal. The unit is just about ready to go into production now.

After members of the dramatic unit have worked together on a few performances, the routine of production is established. In *Vine Street*, the production pattern is pretty much standardized. Episodes are presented on Tuesday and Friday evenings. They last 15 minutes. Generally, three episodes are in advance preparatory production. Content and action of the forthcoming episodes are decided upon by a conference of cast and writers. In this conference the ideas, dialogue and different scenes are plotted out. When the script is complete as to dialogue, camera shots and special effects are indicated. The technical crew is taken into consideration in the fixing of the sequence of scenes. For instance, there is a make-up problem in the aging of a character. A scene involving other characters must be inserted between the sequence in which a man is 40 years old and the sequence in which he appears to be 60. He has to have time to slap on a few artificial wrinkles.

There are other camera and stagecraft limitations that have to be taken into account. Since the ordinary television image is smaller than one foot square, not many people can be pictured at once. Long shots are necessary to get in more than four characters, and the figures are too small to be effective in such shots. Each scene must be considered as a photograph; and balance, composition and flow must be planned in advance—and sometimes readjusted extemporaneously if an actor makes a mistake in his stage positioning. Big, elaborate sets are beyond the scope of television both economically and technically, at least right now. Also, many physically impossible actions that are no bother at all in the movies simply don't go in television.

But the new art has twists and tricks, too. In a recent episode of *Vine Street* the characters were in an airplane, flying across the Pacific Ocean. They ran out of gasoline and crashed on an island. For the first scene the characters sat in a life-size set depicting an airplane interior. Then, while they rushed to another set representing the after-the-crash scene, the nose dive was televised by miniature, with a model airplane guided by wires.

Shirley Thomas plays the leading *Vine Street* role of Sandra Bush, an aspiring actress. John Barkley co-stars as Michael Roberts, her author-sweetheart. Maurice Anthoni carries the parts of most subsidiary characters; he has been televised as everything from a movie executive to an angel.

These principals spend several hours memorizing their lines on the two days preceding the telecast. The day before the performance, an hour or so is spent in refining the recitation of dialogue. That night the complete staff rehearsal is held. Everybody shows up for this: the camera and lighting crew, the dramatic cast, the sound supervisor and sound effects man, and the man who supervises it all—the television producer, Charles Penman.

Scripts are distributed to everyone at the rehearsal, along with a summary of the important camera shots and action, special lighting and sound effects. Any unit member has the right to suggest script modifications.



General studio view of a dramatic scene.

After the changes have been agreed upon, the important or difficult spots in the episode are tested under transmission conditions, with the director and the performance on a receiving screen in a nearby studio. Then comes the dress rehearsal. The whole episode is run off, familiarizing the operative production staff with necessary action correlations. The appearance of properties is checked on the monitor screen and the lighting or properties modified until satisfactory delineation works out. The lighting and positioning of the cast and the accompanying camera angles are also arranged; microphone positions are established and sound effects tested.

Real properties televise effectively, although emphasis has to be lent them through lighting. Background sets and painted properties such as windows and fireplaces are a problem. As John Eugene Hasty, television script writer, complains in a *WESTERN ADVERTISING* article entitled *Here Comes Television*, "A set which looks magnificent occupying the whole side of a studio looks like hell when it's reduced to the size of a commercial photograph. Shaded portions tighten up and become huge, black blotches. Lines become stiff, straight rods. Details will not show at all. Painted sets have to be done in a loose, poster style." Scene painters have to be good at delineating the object from the general tone of the background by making bold, interesting, unrealistic borders. As in cinematography, attention is centered on the main characters by defocusing on the background. In this way the wildest background televisions in desirably subdued tones.

One scene may flow into the next by the movement of either the camera or the principals. On many scenes the lens is four or five feet from the floor. This is considered a high camera position. In one *Vine Street* sequence an unusual elevation effect was attained in an up-in-the-tree shot. The actors were supposedly broadcasting a football game from the vantage point of a tree. The camera was moved to its lowest possible

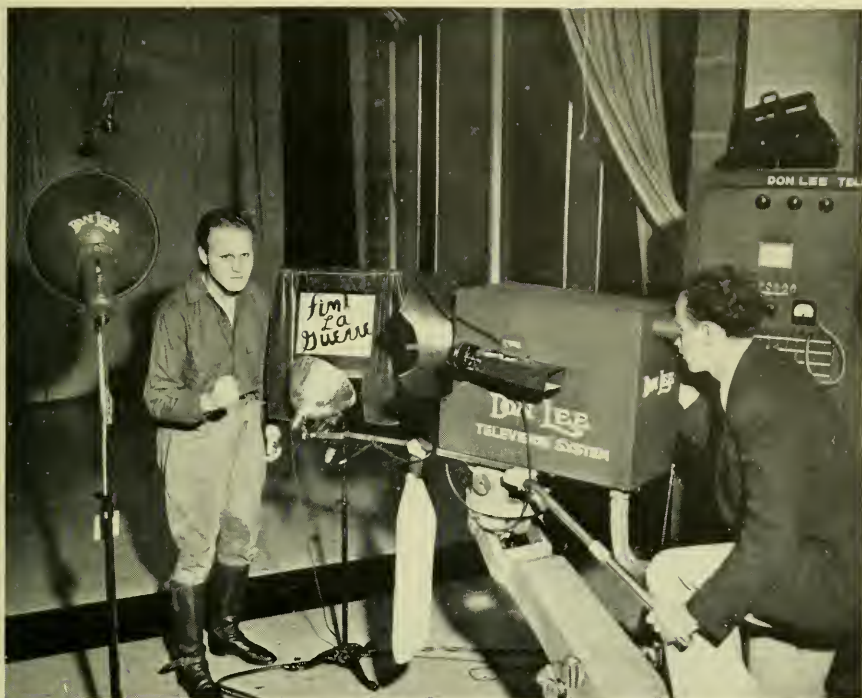
position and the property tree considerably elevated. The shot was perfect—the height effect was almost dizzying. Changes from long shot to close-up are made on an average of two or three times an episode. Two sets are established on opposite sides of the stage area and changes of scene are usually accomplished by panning.

Flat lighting, with all the light coming from the front and top-front of the set, will give television pictures; but they are pictures lacking in interest and sparkle. Television's lighting techniques have been elaborately experimented with and built up by the Los Angeles station, and it's through this work that the *Vine Street* productions show some of their best artistic effects.

The technique of television lighting seems to be limited only by the number of lighting units available, and by the necessity of following characters as they move from one end of the set to the other. Here you don't shoot a sequence, douse the lights, and start placing diffusers for the next sequence. Lighting must be continuous for the whole show. At W6XAO a portable switching panel gives individual control of small unit-groups of the battery, and lighting can be varied considerably without moving a unit. There are supplementary angle changes and diffusers operated from the set, and a few mobile units operated by lighting assistants. Modeling lights for the face need one or more diffusing screens. General lighting is supplied with lamps in dull-finish reflectors. (The television camera isn't free of the problem of over-exposure. Excess lighting on the subject causes the same effect as on photographic prints which have been overexposed. The trouble shows up first on the images of the performers' faces, which lose sharpness and get a washed-out effect. Either the amount or the hardness of the light must be reduced, or else the lens aperture must be stopped down to remedy the overload.)

When lighting, camera, microphone and cast are all perfectly synchronized at the rehearsal, everybody sighs and goes home to jitter until telecast-time. *Vine Street* is always the last act on the television program, so the scenery and properties are placed before the telecast in a special studio not used for other shows. A few hours before the performance the cast is made up. Eyebrows are accentuated with black or dark brown liner. Shirley Thomas dons artificial eyelashes and John Barkley applies eye shadow. Lipstick is brownish violet, because the camera tube's sensitivity to red is so great. Both of the *Vine Street* stars are of the dark brunette type; redheads develop haloes and so do blondes, but brunettes without too many hair highlights pass beautifully.

The introduction to the show is provided by the playing of a transcribed theme song, a miniature stage, and an appropriate spoken paragraph. The raising of the miniature main curtain, the drawing of a side curtain, and the retraction of side wings starts the performance in motion picture title fashion. The curtain and wing movements result in the display of a sign reading "*Vine Street, by W. H. Pettitt.*" The side wings move in to obscure the sign, which is replaced by another: "Starring Shirley Thomas as Sandra Bush." Next comes Shirley's photograph. The same procedure introduces John Barkley. Simultaneously with all this visual action, an offstage announcer ties the forthcoming episode to the previous action and introduces the episode.



Picture of a television camera with a lens shade. Note the notch cut to fit a small spotlight for closeup shots. If too much light is used in the studio, the camera tube is overloaded and in effect washes out the hands and face. Clothes and hair then float around by themselves and create an eerie scene to the spectator at home sitting beside his teleceiver.

Cues for both visual and aural production are given, the camera pans to the scene, and action starts. Sometimes Producer Penman stays home to watch his show on a regular receiver, instead of on a monitor screen in the studio. He keeps a conference-circuit telephone line open to the earphones of various members of the production east and points out defects in lighting, camera technique, microphoning, control adjustments or transmission. This homework in which Penman engages is important, because he is looking at a representative image as it appears after traveling a number of miles and encountering more interference than the monitor does.

The closing fadeout of the episode is made on cue, and the camera is switched to a sign reading "Vine Street." The fade is made electrically, as in most scene-to-scene changes. Fades may be long or short, and there are two other types beside the electrical fade. In an "out-of-focus" fade, the cameraman quickly turns the camera focus control so far out of focus that the image remaining is a blur of light intensities, and then refocuses coming into the next scene. A "lighting" fade is done simply by extinguishing the lighting units which illuminate the scene. That effectively ends action. As the final "Vine Street" sign flashes, the theme music fades in for a short interval, then fades down while the announcer gives the closing comments on the episode. When he finishes, the music is raised to full volume for a few more bars, and the show's over.

An Easy Method For Checking Between-The-Lens Shutter Speeds

Lester H. Brubaker

HAVE you ever wanted to check the shutter speed of your camera, but felt that most methods required too much equipment and film in addition to a great deal of time? If so, I believe the method outlined here will be most welcome; you can check that suspicious shutter in an evening without using your month's supply of film.

First, have you or can you borrow a phonograph or record player attachment for a radio? You can?—Good! Your shutter is practically checked. Now go to an electric store and buy two flashlight bulbs (2.3 Volt, focusing type), one “Little Six” dry cell, and a three-foot piece of No. 18 cotton covered annunciator wire. If you have no soldering iron around the house you'll need two porcelain sockets for the flashlight lamps.

You must now tear or cut a hole in the paper covering of the dry cell at the center of one side. This makes room for the little center projection of the record holder, and the battery will lie flat on the turntable as shown in the photograph. Cut the annunciator wire into two six-inch and two ten-inch pieces, solder the wires to the contacts on the bulbs, and connect them to the battery as shown. The lamps can now be covered with India ink; when the ink is dry scrape a little hole just over the filament so that a little spot of light is emitted.

Your apparatus is now complete; place it on the turntable of the phonograph, and bend the shorter wire until the spot of light is centered with the axis of rotation. When the disc is turning this spot must appear to stand still. If you haven't centered it exactly slide the battery around slightly until the light is centered. Now bend the outer wire so that it holds the revolving lamp at the same level as the center lamp, and start the turntable.



Figure 1. A very simple yet accurate shutter speed tester. The camera is pointed directly down at the lights, and they are photographed as they rotate.

Set up your camera with the lens pointed directly down at the revolving lamps; focus on the lights. Make several spots on your finder or ground glass: one for each shutter speed you want to check. These spots are the positions in which the center light is going to fall on your film. Make sure that the outer rotating light is also in view for each of the positions of the center light. If you are using a direct view finder stretch a white string across the long way of the rectangular frame, and mark the positions on the string with ink.

If your camera is loaded with SS Pan. or other fast film, stop your lens down to $f:6.3$ or $f:8$ and make an exposure at one shutter speed with the center light in one of the marked positions. Move the camera over until the center spot coincides with the next mark, and make another exposure at another shutter speed, and so on, until all your shutter speeds have made their records. Develop, fix, and wash your negative, and while it is drying get your pencil, paper, protractor, and a fine needle.

Your film will show a series of arcs of varying lengths, and a series of centers for these arcs. (If you aren't sure which center goes with which arc you can check them quickly with a compass.) Now, how to interpret results? The turntable turns at 78 revolutions per minute. If it is a synchronous motor drive you're sure of it; if it's a spring drive you should have checked it with a stroboscopic disc and adjusted it accordingly.

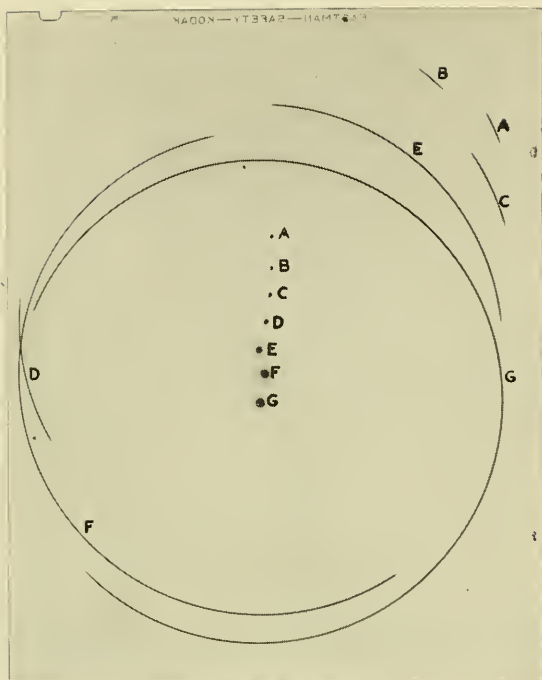


Figure 2

Photograph of the negative obtained using the apparatus pictured in Figure 1. Note that all shutter speeds were checked on the same film.

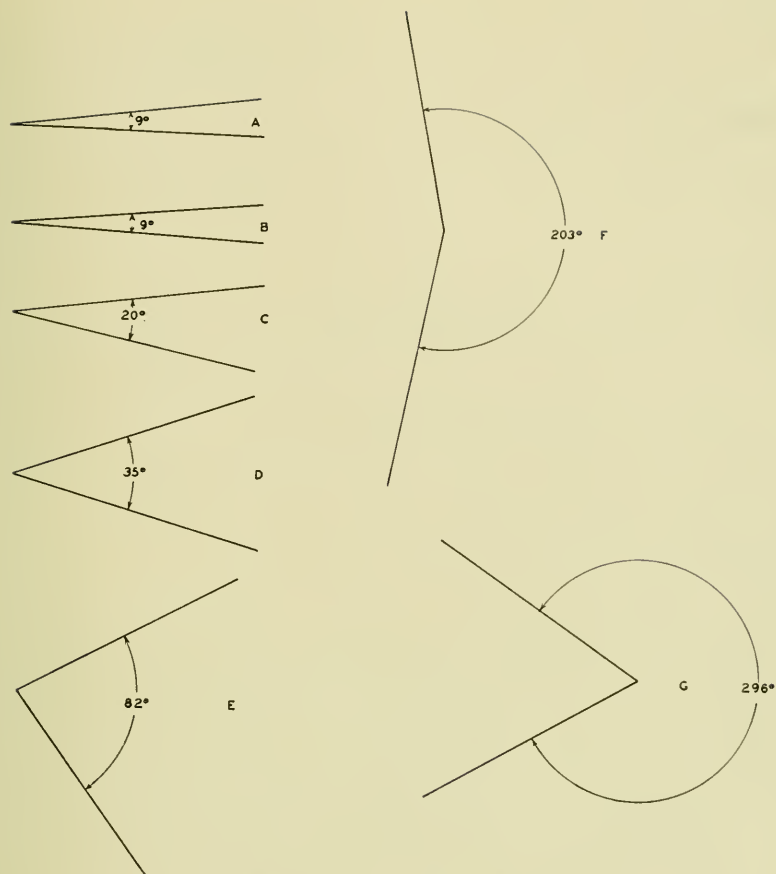
Seventy-eight revolutions per minute corresponds to $78/60$ or 1.3 revolutions per second. In each revolution there are 360° , so in 1.3 revolutions there are 468° . Thus, the revolving light rotates through 468° each second.

Our calculation is quite simple. We place the film on a piece of paper, and push the needle through the film at the center of rotation and at the two ends of the corresponding arc. Remove the film; draw the angle indicated by the center and the other two points, and measure the angle with the protractor. The measured number of degrees divided by 468 gives the fraction of a second during which the shutter was actually open (in spite of what the engraved numbers on the shutter state).

Of course if your camera is a miniature with a shutter between the lenses it would increase your accuracy to project your negative on a piece of paper and construct the angle from the projected image.

Don't be too disappointed if your shutter isn't as good as you thought it was. I thought mine was practically perfect until I checked it. Probably if you check the shutters of your friends' cameras you will have company in your grieving. Or better still invite your Camera Club to an evening of shutter testing, and someone is sure to have a "let down" on a prized camera.

Accuracy? If you can construct and measure the angle of the arc to one degree, you can check the shutter speed to $1/468$ second.



Test Number	Angle	Measured Speed (Seconds)	Indicated Speed (Seconds)	Per Cent difference from Indicated Speed
A	9°	$9/468 = .019$	.01 (1/100)	Slow 90.0%
B	9°	$9/468 = .019$	.02 (1/50)	Fast 5.0%
C	20°	$20/468 = .043$	.04 (1/25)	Slow 7.5%
D	35°	$35/468 = .075$	.10 (1/10)	Fast 25.0%
E	82°	$82/468 = .175$	.20 (1/5)	Fast 12.5%
F	203°	$203/468 = .434$	.50 (1/2)	Fast 13.2%
G	296°	$296/468 = .633$	1.00 (1)	Fast 36.7%

Figure 3. Analysis of the shutter accuracy indicated by the negative in Figure 2. Using the ends of each arc and the corresponding centers of rotation, the angles are constructed and measured. The number of degrees in each angle divided by 468 gives the actual speed of the shutter in each case.

Cinema Section

Edited by

William A. Palmer

With Time Eternal- - - -

And A Rabbit's Left Hind Foot

H. B. Butler

THE weather is against you. So is the angle at which the sun strikes. The wind is a menace, and Gorgonzola cheese can be your mortal enemy. The new secretary opens a can of film just a tiny bit to see if it has been exposed, and closes it quickly when she finds it hasn't.

And so it goes. Movie business. Hours spent in planning against every possible contingency, with the unpredictable doing its best to upset the whole shooting schedule. If it succeeds? Then hours of waiting for proper photographic conditions. Hours of re-takes. Intricate cutting. Work on the optical printer. All meticulous jobs, seasoned with luck to produce the final desirable result. For that term "unpredictable" covers all the territory from a slight discrepancy between the weather bureau report and actual climatic conditions, up to the near tragedy of the Gorgonzola cheese. To overcome "unpredictable" one needs not only knowledge, but endless time—and a rabbit's foot.

About the cheese— If ever a movie trip was planned to the Nth detail, that one was. We were to shoot the dramatic climax of a sardine catch on board one of the purse-seiners of the famous Monterey sardine fleet. The fishing itself is done in total darkness—even to the "dark of the moon," since light scares the fish. But when the sardines are safely circled and pursed in the great seine, the boat lights flash on. The brailing sock dips like a gigantic inverted butterfly net, hoists its two ton load of dripping silver, and spills it into the hold, until the seine is emptied. You can see the cork line of the seine—thirteen hundred feet of it—restless on the dark water as a phantom snake. And around its circle the skiff men row—bunching the line when necessary, and now and then, reaching in to jerk out a shark that might have sent the whole school diving.

That year the fishing was bad. Weather too rough to lay out the nets. Sardines scarce. In September a scouting trip had been made to find out what the conditions were and what equipment would be needed. Then storms and

squalls, and moonlit nights harbor-locked the sardine fleet, until the season was nearly over before we had a chance at the actual shooting.

We were six seasoned sailors, and as an extra precaution against the Diesel engine and peculiar gait of a purse-seiner, we had downed a never-fail seasick remedy. We were equipped with warm, waterproof clothing. We had cameras, film, lighting equipment. We knew the layout of the boat, where to lash the lights, where the action would take place, and each man knew his duty to the last detail.

What we didn't know—aside from the cheese—was that when we went down to the pier at noon to rig up our equipment, the purse-seiner simply wouldn't be there. She came in at five-thirty, just in time to pick us up, and to ehug out with the rest of the fleet.

So instead of getting set up in the calm of the harbor, we did it under difficulties, in a steadily roughening sea. Because the boat's generators were insufficient, and reflectors could not be used, we had provided our own light. Five k.w. lamps lashed in strategic positions, ready to be trained on the action, and fifteen minutes of current from batteries. Not enough to turn on the lights and leave them, but all we'd need plus a margin, with the juicer to mind the switch.

We emptied the camera on irresistible shots of the sardine fleet leaving Monterey harbor.

At six-thirty we went down to the galley for a typical Italian dinner. The small room bulged with fishermen, and jingled with talk. Cookie presided over the red stove, and seasoned each serving of ravioli with complaints against his tough lot and threats about quitting.

One of the crew whispered, "He don't like. For ten years he's beena going to quit. Sometime maybe—" He shrugged and winked. He might have been talking about a man in the movie business.

We decided not to re-load the camera till there was space to do it in, and having dined, retired to the purer air of the deck.

By eleven the warm waterproof clothing was neither. And in the galley we found the crew eating still or again—this time on a Gorgonzola cheese. A lovely, large, luscious, ripe cheese. It was still too crowded for convenient space to load the camera. No one felt like doing it anyhow, and one at a time, as unobtrusively as possible, five or the six seasoned sailors left to commune with the lonely stars.

Shortly after one o'clock, the camera had to be loaded whether we wanted to do it or not. We were in fish. Every light on the boat out. Skiff lowered. The purse-seiner circling in the darkness. The rain storm sound of millions of sardines. . . .

The camera man had been sitting on a coil of rope, criticizing Diesel engines, Gorgonzola, the so-called Pacific Ocean, sardines and the movie business. But down to the galley he went (it was the only dry place on the boat to do it) and crouching in total darkness between the hot stove and the cheese, loaded the camera. It was a Cine-special. For that, and for re-loading just before dawn . . . orchids.

Then the boat lights on . . . but from our lights, darkness. And of the six voices that should have relayed their Okays when the lights flashed, only one sounding. "Okay" . . . when everything had been kayoed by Gorgonzola.

The sole survivor rushed down to the light switch. No juicer. He threw the switch, and the lights flared toward the sky. He dashed toward the lights.

No one to hold them. With more lashings he steadied them in approximately the direction of the action. He yelled for camera, and that heroic cameraman stood up to take the pictures, said "I don't feel so well," and collapsed on his coil of rope.

So one man became director, cameraman, juicer and three helpers, and photographed single handed the brailing of a sardine catch. For which he deserved no particular credit, since one doing the work of six is the way things are in war and the movie business.

But for a long time afterwards, if cheese was mentioned to any one of us, we'd try to look over our shoulders to see if the devil was approaching.

Once in a while—say, in two blue moons—lady luck forgets to act like a hussy. There was the time a close-up had to be taken of a blast in a New Mexico potash mine. The whole wall at the end of one of the drifts was to be blasted, with flares burning and camera grinding just thirty feet away.

The camera man—willing to give his all, but not all at once—spent the greater part of a day rigging up a gadget to trip the starting button by remote control. When he finished he found it wouldn't function; there was too much resistance in the length of wire he'd have to use. In such cases one simply takes the picture when the time comes.

He lashed the tripod to a tram road tie, to steady it against the concussion, set the camera going, and started sprinting for the safety of an angle,—like a small boy who'd stuck a pin in a doorbell. The flare was lighted, and as soon as the miners saw that it was going steadily, they touched off the blast.

An instant's pause. Then tons of potash moving. Stones flying at and around the camera. And when the dust had settled, by some miracle, the camera and tripod untouched. The film itself, clearly detailed, dramatic, accurately exposed. And the camera man only ten years older.

Sometimes one's only activity is waiting. For a lens to get cold enough so that it won't fog in the frozen hold of a tuna boat. While fishermen grumble about the delay in unloading, and it's the last chance to get the shot. Sometimes in a fig orchard, when a photogenic tree has finally been found. Just then a small wind rises from nowhere, and blows dust until the light fades. And if you think you can go back in the morning and just set up your camera, you're mistaken. Either the pickers will have been there before you, or birds will have pecked the figs. Sometimes—ad infinitum—one waits for the sun to get into the right position for exteriors that can't be staged. And waits hours and days while indoor sets are made photographically acceptable. In fact, if ever you see someone waiting—undoubtedly he's in movie business.

When it Comes to Lab Work—

The first rule in a movie lab is to consign tragedies to the cutting room floor. Then all one needs to complete a successful picture is a complete set of mirrors, two top hats, several assorted rabbits, and the knowledge of what the finished production is supposed to look like.

—the mild example of the golfer, whose game was in the state known as "improving." He wanted movies made of his Sunday morning round, and the camera threw him off his uncertain stride. He sliced, hooked, topped, and even missed his strokes, while the camera ground only at tactful intervals. At last, after two hours of golfing horror, he made a seventy foot chip shot onto the green. He beamed, but took three putts to sink it. The assistant tossed a ball

onto the green. Fortunately it rolled into the cup. And when the grateful golfer saw himself, he found he'd done what he'd always known he could . . . sunk a superb seventy foot approach smack into the cup.

But every movie camera addict has done something of the sort as a matter of courtesy. More intricate is the ripening of a peach on the optical printer instead of in the orchard. Since the expense of a time-lapse camera was prohibitive, it was done by a long lap dissolve from the blue-greens to the oranges of color film. Still more difficult is the finagling necessary for editing an incomplete movie into a coherent, plausible sequence.

Incidentally, about a scratch on the negative. It never happens except on an irreplaceable strip of film.

What Sound?

In the uncontrolled conditions of recording on location, one of the minor annoyances is cutting out the dot-dash of shortwave radio that sometimes comes in over the mike line. Ordinary electrical shielding is not sufficient to cut out the extremely powerful radiations of a nearby transmitter and one must resort to extraordinary filtering and shielding. One of the most successful solutions that can be conjured on the moment is to place the entire recording amplifier in a garbage can, the can acting as a shield, not as a depository. In some cases the interference can be eliminated by holding the microphone cable in odd positions, the holder's body acting as a filter and the position changing its length. Once in a while, we get telephone conversations the same way, but they never are interesting.

A mistake in copy can have whacking repercussions on a sound track. This one was a simple typing error in which 400 instead of 400,000 was written. It was not caught until the play back, when the sponsor was horrified to learn that his, the largest orchard in the world, contained more than 400 fruit trees. Back came the announcer and sound crew to reestablish the extent of the fruit industry.

However, the current and most fashionable problem in recording is deciding what sounds sound like what sounds. When a football game, made in silent film was being recreated with sound accompaniment, we were trying to reproduce the crack of the pistol at the end of the game. The purpose of the sound track was to reproduce the game as if it was coming from a broadcasting booth. The crack of a pistol muffled by distance and blurred by the peculiar acoustics of a stadium was what we wanted. We dropped boards, banged doors, and broke paper bags trying to reproduce the effect. Finally, we found that the sound of a firm cushion, slapped with a stick outside in the echoing hall, gave the illusion.

The sound effects game is going on in the grand manner, with records available on everything from crowd noises to hollow coughs, and more coming. Slowed, speeded, or played backwards, they resemble anything except their origin. A pig's squeal run backwards at high volume is the sound of ice crashing down from a glacier, a pistol shot slowed down is thunder that out-thunders thunder. The latest gossip along the boulevard is about the sound engineers who worked for days trying to simulate the sound of ham and eggs sizzling over a campfire. Came the genius—so the story goes—who *guaranteed* to do it for them. He brought wood, paper, matches, frying pan, eggs and ham, set it all going, and it worked.



"Still Life"

R. F. McGraw, Sierra Madre, Calif.

First Award—Advanced Class

■ It is a great help if photographers thoroughly realize that in the final analysis pictures are built up almost entirely through *contrast* of one sort or another. In this picture, material of no great intrinsic pictorial value is made interesting and effective through contrast of line, tone and texture. The straight lines of the corrugated cardboard are contrasted with the curves of the fur and silk and with the curve along its own outline. The textures of the three items are interestingly contrasted and emphasized by lighting. The tone values are adjusted through lighting so that emphasis is placed on the fur, which becomes the center of interest. Notice that all the main lines lead toward the fur and that it is placed in a strong position in the picture space. The wise photographer is constantly on the look-out for opportunities to bring such contrasts as these into play for he knows that they are a sure means of adding interest value to his pictures.

Data: 4 x 5" Crown View; 7" Rapid Rectilinear; E. K. Super XX in Pyro-Acetone; 8 x 10" print on E. K. Kodabrom glossy, in D-72. Lit with two spotlights. One on left adjusted for broad light; one high on right, concentrated.

Second Award
Advanced Class

■ In making pictures in which smoke or steam play a part the photographer should keep in mind that the obscuring effect will be greater in the print than it appears to the eye. This, because the smoke or steam has a high reflecting power and because the eye looks at the scene continuously, retaining what was seen a moment ago and is now obscured, while the camera records but a single aspect. Consequently such pictures as this should be exposed at a moment when the scene is less obscured than is desired in the finished print. Mr. Dabac has selected the right time for this exposure, so that the smoke achieves its effect without blocking out details which should be visible. The figures are nicely arranged about a circular motif, with the figure at the left maintaining dominance because of size and greater brilliance because it is not obscured. There is a bit too much camera consciousness particularly in the man furthest from the camera and the two strong highlights which cut the right edge of the print should be toned down.

Data: Automatic Rolleiflex; Agfa Isopan; 12 x 13" print on E. K. Bromesco. Prints may be obtained at the price of \$6.00 upon application to Camera Craft.



"Preparing the Lunch"
Toso Dabac
Zagreb, Jugoslavia

Third Award
Advanced Class

■ Clutter and disorder seem to be one of the things which characterize extreme poverty, and this makes it difficult to obtain a perfectly ordered composition without depriving the picture of realism, by giving it a too "staged" appearance. The photographer's problem is to decide where the point of balance between these factors lies. It seems to us that Mr. Kornic has hit it about right. We would like to eliminate the white paper in the lower right but would not go beyond that in simplifying this material. The low level of the lighting no doubt made a smaller stop difficult to manage but the picture would be improved if greater depth of focus could have been obtained.

Data: 6 x 6 cm. Rolleiflex; 1 sec. at F:7.5 on E. K. pan. film, in Gevaert fine grain formula; natural lighting 11 A.M. in August; 11 x 14" print on Agfa bromide in M.Q. Prints may be obtained at the price of \$10.00 upon application to Camera Craft.



Ante Kornic
Ljubljana,
Jugoslavia

Fourth Award

Advanced Class



"The Guardsman"

*Phen Zolot
New York, N. Y.*

more "in character." The lighting does not seem to account for the highlight on the upper right side of the forehead, so we can only conclude that this must be due to a defect in the negative.

Data: Zeiss Super Ikonta C; 1/25th sec. at F:6.3. on Agfa Super Pan Press, in Agfa 17; 11 x 14" print on E. K. Kodabrom, in D-72.

Fifth Award

Advanced Class



"Keikikane"

*M. Arthur Robinson
Berkeley, Calif.*

■ The expression is very well caught in this photograph and the pose is nicely calculated to present the action in natural fashion. Only weaknesses which we find in the picture are two elements which tend to turn attention away from the face. The space below the elbows is unnecessary, and the lines of the arms and torso tempt the eye to wander down to this area. If we trim from the base until the tips of the elbows are eliminated we remove the eye attracting power of this lower area and at the same time supply a broader, firmer base in support of the head and a desirable simplification of the composition. The area of sky enclosed by the neck and arms constitutes the brightest tone of any size in the picture, and appears more so through contrast with its dark surroundings. For these reasons it catches the eye unduly. If the tone of this area is lowered and the tone of the sky just above the face slightly lightened the result will be much greater concentration of attention on the face.

Data: 11 x 14" bromide print.



"Two Little Kittens"

Ellis Johansen

Omaha, Nebr.

First Award—Amateur Class

■ If we can strongly show the qualities which people have come to believe characterize the things we photograph, we have then gone a long way toward the achievement of a successful picture. That is what Mr. Johansen has done here. He shows us the softness of the fur (through texture); the comical awkwardness which comes from unsteady legs; and above all the curiosity for which cats are famous. The definition is not absolutely sharp but it seems reasonably sufficient for this material. Complete sharpness might easily detract from the feeling of softness by giving the fur a too wiry appearance in the print. The lighting is well planned. Its concentration on the heads of the kittens helps to simplify the arrangement. The right hind leg of the kitten on the left, which is dimly seen near the left edge of the print, appears to be disassociated from its body. This, of course, because the contours at this point are lost against the background. This leg is now disturbing because it pops out of nowhere and is apparently attached to nothing. It should be possible to dodge in the print at this point until the leg itself will be lost against the background. 4

Data: Leica; 50 mm. Elmar F:3.5; 1/20th sec. at F:3.5. on Du Pont Superior, in Champlin 15; 3 P.M. in June in shade; 8 x 10" print on Agfa Brovira, in Agfa 130.

Second Award

Amateur Class



"Twosome"

*James Jenkins
Los Angeles, Calif.*

shot from a camera position slightly to the left. The dog, of course, should be looking to the left rather than at the camera.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ " Zeiss Snper Ikonta B; 3" Zeiss Tessar; 1/50th sec. at F:11, on Agfa Super Pan., in Agfa 17; GR-55 (yellow-green) filter; 11 x 14" print on Defender Velour Black Rough White Lustre, in Agfa 125.

Third Award

Amateur Class



*C. Stanton Loeber
San Francisco, Calif.*

shadow is soft. An examination of the figure shadows will show how the sharpness of outline diminishes as the distance from the shadow-casting object increases.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Popular Pressman; 7" Aldis; 1/60th sec. at F:8, on E. K. Panatomic X in DK-20; 13 x 16 $\frac{1}{2}$ " print.

■ This picture conveys the pleasant feelings of sunshine and great space, and the print has nice rich tonal quality. Mr. Jenkins was wise to adopt a low camera angle and to select a lighting which threw the foreground into shadow. These factors combined assure a good firm foundation for the support of the great tree. There is a considerable feeling of movement toward the left, because the girl is looking that way and because the faint cloud forms move in the same direction. Because of this movement the figure should be placed a bit more to the right of center than is now the case. The area of sky to the right of the tree combined with the line of the ground, offers an opening which tempts the eye to slip out on the right. We can correct this and at the same time improve the placing of the figure by trimming away half the distance from the trunk to the right edge of the print. This has the disadvantage of reducing the mass of the foliage in the upper right which is now in nice balance with the foreground. Probably the most satisfactory adjustment would be obtained by making a new

■ The figures are admirably placed so that they occupy the strongest position and so their shadows fill the picture space very interestingly. Notice that the shadows of the three secondary figures run into the balustrade and are thus prevented from introducing unnecessary complication, which would reduce the dominance of the three principal figures and shadows. The directional force of the balustrade is nicely checked by causing it to terminate at one of the uprights. The composition is weak in the upper right because the light tones here afford an opportunity for the eye to slip out. Slight dodging would help but if carried far enough to really hold the eye in firmly it would be evident that the lighting was falsified. There is nothing to prevent us from imagining that a building, tree, fence or what-not is located just beyond the upper edge of the picture, so that it will cast a shadow of the shape and size we desire over the area in the upper right. Such a shadow can then be dodged in with the help of a cut-out. Care should be taken to see that the lower edge of the

Fourth Award

Amateur Class

■ This photograph is technically fine and there can be no doubt that Mr. Breeden has seen and appreciated the nice relation of size and spacing between the gate, barrel, basket and fence. By careful selection of camera angle he has organized these into a well balanced arrangement. We feel that the picture is less interesting than it might be because it lacks emphasis and movement. Notice that the principal objects are all much the same in tone value, texture, and interest value. As a result no one object really dominates and consequently the visual element of emphasis is absent. The lack of strong movement is a result of the lack of emphasis. There is no object which pulls the eye more strongly than the others, with the result that the eye drifts through the picture instead of being firmly led. As an example of how emphasis might be achieved in this picture, imagine the basket replaced by a metal container quite light in tone. This would introduce contrast in both tone and texture, and would constitute a strongly dominant note which would pull the eye and initiate its movement through the picture space.

Data: 8 x 10" glossy bromide prints on 14 x 18" mounts may be obtained at the price of \$10.00 upon application to Camera Craft.



"Backyard on Alley"

John P. Breeden, Jr.
Palo Alto, Calif.

Fifth Award

Amateur Class

■ Mr. Rundle has caught a nice bit of action here and the lighting produces very nice modeling and flesh tones in the face. There are two weaknesses which tend to mar our enjoyment of the picture. The very rapid falling off of focus in the hair and the sleeve is disturbing, particularly so since the transition from sharp face and hand to quite fuzzy hair is so abrupt, and because the close proximity of these two areas forces the difference in focus on our attention. It would help if the book could have been lowered slightly so that the action which is taking place could be more fully seen.

Data: 3 1/4 x 4 1/4" Series D Graflex; Kodak Anastigmat F:4.5; Triple S Pan in Agfa 17M; 10 x 11" print on Defender Velour Black I in Agfa 135; lighting as per Mortensen Plastic Light, with one 500 W. lamp on subject and another on background.



R. Rundle
San Francisco, Calif.

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced class: Ante Kornic, for the Fotoklub Ljubljana; Toso Dabac, for the Fotoklub Zagreb; Phen Zolot, for the Manhattan Camera Club; and R. F. McGraw, for The Pack Rats.

The following won prizes for their clubs in the Amateur Class: C. Stanton Loeber and R. Rundle, for the California Camera Club.

The following prize winners have no club affiliations: M. Arthur Robinson, Ellis Johansen, James Jenkins and John P. Breeden, Jr.

Contributing Clubs

Amherst Camera Club (Mass.)
California Camera Club (San Francisco)
Camera Art Group (India)
Cincinnati Camera Club (Ohio)
Cleveland Photographic Society (Ohio)
Connecticut Camera Club (Hartford, Conn.)
Dallas Pictorialists (Texas)
Denver Lensmen (Colo.)
Detroit Camera Club (Mich.)
Florida Camera Club (Tampa, Fla.)
Fort Dearborn Camera Club

Fotoklub Ljubljana (Yugoslavia)
Fotoklub Zagreb (Yugoslavia)
Lens Hawks (New Ulm, Minn.)
Lititz Springs Camera Club (Pa.)
Long Island Photographic Society (N. Y.)
Manhattan Camera Club (N. Y.)
Midwood Camera Club (N. Y.)
The Pack Rats (Pasadena, Calif.)
Photographic Society of San Francisco
Utica Camera Club (N. Y.)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	43
Indianapolis Camera Club.....	11
Fotoklub Ljubljana	8
Fotoklub Zagreb	7
Pictorial Photographers of America.....	6
Miniature Camera Club of Oakland.....	5
Los Angeles Camera Club.....	3
Manhattan Camera Club.....	2

Small Clubs Advanced Class

The Pack Rats.....	14
Yellow Springs Camera Club.....	7
The Camera Clique.....	2
Aluminum Camera Club.....	1

Large Clubs Amateur Class

California Camera Club.....	10
Camera Club of Richmond.....	10
Detroit Camera Club.....	9
Miniature Camera Club of Oakland.....	4
Photographic Society of San Francisco.....	4
Cleveland Photographic Society.....	3
Indianapolis Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool	13
Dallas Pictorialists	12
Signa Phi Nothing.....	5
San Jose Camera Club.....	3
Vancouver Photographic Society.....	3
Amherst Camera Club.....	2
Florida Camera Club.....	2
Fresno Camera Club.....	1
Midwood Camera Club.....	1
Sierra Camera Club.....	1

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired, on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Correspondence*

Good News from the Profession

Dear Sirs:

In your last issue you have an article by a Mr. Cassoday entitled "Is Photography Heading Towards Dictatorship?" This article does this Association a very serious injustice, inasmuch as the model law which we had prepared and furnished to state organizations is materially different from the Wisconsin law in a number of aspects. This Association has no intention whatever of attempting to harm amateur photographers or to dictate to them. It was our job merely to provide a model law that would help to clean up this profession and, having done that, our duty was over, inasmuch as we have no control nor connection with the various state associations in this country.

Having furnished them the model law, our job was done. Some of them have seen fit to take that law and attempt to make it vastly more stringent than we had in mind. By so doing, in every case they have defeated their own ends and have aroused tremendous opposition. Our particular objection is to Mr. Cassoday's flat statement on page 376 of your magazine "(modeled, remember, after the form proposed by The Photographers' Association of America)," inasmuch as, first of all, the Wisconsin law is not modeled after our form and, secondly, our proposed law neither includes, suggests nor contemplates any such apprenticeships as Mr. Cassoday mentions.

We would appreciate your giving this suitable publicity, as we do not want the amateurs of this country to get the impression that this Association is in any way attempting to hamper their activities.

Sincerely yours,
Charles Abel,

Executive Manager,
The Photographers' Association
of America.

About Subject Matter

Dear Sirs:

Replying to the letter from Jack Wright on page 390 of the August number, Mr. Wright writes with a moderation which, much as I may respect him for it, I may find it difficult to emulate, hence I ask his forgiveness in advance. My desire is to express disagreement with him but certainly not to give him personal offense.

Mr. Wright's big point is that "photography is the art of the people" and that therefore it must be "impossible for composition, by itself, to be enough." He regrets the "tendency on the part of some photographic critics" who profess "to see things in pictures which are not apparent to the ordinary man and woman." He hits a bit below the belt by saying that those of us who enjoy photographs of "a coiled piece of rope or some posts and a bit of barbed wire" only "profess to know photographs." That means, of course, that he knows them and we don't. We only "profess" that we do.

Now, all this is simply an expression of a limited viewpoint which Mr. Wright would be fully justified in holding for himself, but his letter implies that all those who do not agree with him are in the wrong; that we "profess to find beauty where there is, in fact, no beauty and not even intelligence." In this he goes too far and lays himself open to reproof. His words are characteristic of an attitude held by many individuals for whom art must offer a picture of familiar things, must be more or less a mimicry of objective nature. The lack of logic in this position is easily shown by a comparison with other arts. A comparable attitude would demand that all music be an imitation of natural sounds and that the dance must be a mimicry of recognizable story-telling movements. Bach and Handel, Mozart and Scarlatti would be out, and so would the best of the modern dancers whose movements are pure abstractions. I regret to say it, Mr. Wright, but many of us believe it is time that photography advanced beyond the sophomoric romanticism which has predominated in so much of it. Many of us are quite sincere (and are justified in protesting when our sincerity is questioned) in enjoying the purely meaningless arrangements of counterpoint and harmony in sound, and the purely meaningless arrangements of line, form and texture which are the corresponding counterpoint of the visual arts.

And that is the point at which many mislead themselves—they fail to perceive that an arrangement of non-objective forms or partially objective forms can be as thrilling to others as their fond pictorialism is to them. It is all a matter of sensitivity in an area where they have thus far failed to develop appreciation.

And finally it might be said to Mr. Wright that those of us who enjoy what he enjoys in photography, plus something that he does not enjoy, are not necessarily for that reason members of a "cult." One takes exception to that intentionally derogatory reference unless he will admit that intolerant conservatism also indicates a cult.

Sincerely,
Roi Partridge.

Art Department
Mills College, Calif.

John Vanderpant, F.R.P.S.

Dear Sirs:

It is with great regret that I have to announce the passing of John Vanderpant, F.R.P.S., at Vancouver, B. C., on July 24th.

New-comers in the pictorial field may not remember the pictorial simplicity that characterized the many Vanderpant successes of a little more than a decade ago, but to those of that time they will be readily recalled.

John Vanderpant was in every sense a purist, an idealist, and sincerity was one of his greatest qualifications, both in his art and in his daily life.

He saw beauty in ordinary things, and portrayed it with consummate skill.

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

The salons have seen little of his work during late years, most of his leisure time being devoted to the purely aesthetic, and in these later studies his use of light and shade to give "life" to inanimate form proves well his mastery of photographic art.

His work as a lecturer, too, was outstanding, and in this he possessed the rare qualification of carrying his audience with him in his enthusiasm for his subject.

He held that Art was so wide, so all embracing, that only a mind capable of great compromise and understanding could fully comprehend it and be qualified to judge. As a judge he was, in my humble estimation, second to none, his understanding and knowledge being so thorough. If he held any shred of intolerance at all it was for insincerity in the work of those who in his opinion were qualified to know and do better.

To those who were struggling to improve he was full of a great kindness.

There will be many, the world over, who,

remembering his work and his associations with them, will note his passing with regret.

Truly yours,
H. G. Cox.

New Westminster, B. C.,
Canada.

Correction

Dear Sirs:

I would like to call your attention to an error in your July issue under the heading "Photo I. Q." in which item 6 on page 328 states that a Pola-Screen increases the exposure four times.

If you will refer to the Eastman publication "Photography by Polarized Light" you will see that a Type No. 1 Pola-Screen requires four times exposure and a Type No. 1A requires two times exposure, and both of these screens are designed for use on the camera.

Very truly yours,
R. M. Sanford.

Hopewell, Va.

What Is Your Photographic I. Q.?

Your Photographic I. Q. quiz for this month is a study of contrasts. It's simple but catchy and should not require over five minutes of your time.

Read the statements as given below and check the correct answers. Deduct 10% for each error. The perfect score is 100%; excellent rates 90%; very good 80%; good 70%; fair to bad, below 70%. Compare your answers with those on page 446.

1. The calotype, a contemporary of the daguerreotype, dealt primarily with:

- ☐ Mass.
- ☐ Detail

2. The Supermatic shutter, an Eastman product, is one of their

- ☐ Earliest made shutters.
- ☐ Latest made shutters.

3. The difference in the time of exposure required to produce the faintest visible recording and that required to produce a maximum black on sensitized paper is known as the

- ☐ Tonal scale.
- ☐ Exposure scale.

4. In movie work, the best way to make a panorama is from

- ☐ Right to left.
- ☐ Left to right.

5. Blue light rays are said to be:

- ☐ Short.
- ☐ Long.

6. In photographing both a landscape and a portrait at F:8 as shown on the diaphragm scale, the effective aperture in the latter is:

- ☐ Less.
- ☐ Greater.

7. A rich black and white print when sepia toned will give a:

- ☐ Weak sepia tone.
- ☐ Strong sepia tone.

8. In color photography both Dufaycolor and Kodachrome film are employed. The latter uses a technique based on the:

- ☐ Additive process.
- ☐ Subtractive process.

9. Two famous collaborators in early photography were:

- ☐ Daguerre and Niepce.
- ☐ Niepce and Stieglitz.

10. If a colored object is photographed through a filter of its own color it appears:

- ☐ Light.
- ☐ Dark.

Club Notes

Annual West Virginia Salon of Photography. Sponsored by the Charleston Camera Club in cooperation with the West Virginia State Chamber of Commerce. Address Salon Committee, 903 Sixth St., Charleston, West Virginia. Closing date August 31, 1939. Entry fee \$1.00, limit six prints. Sept. 17 to 20, 1939.

Second Annual All Wyoming Photographic Salon. Address All Wyoming Photographic Salon, Raymond Loomis, Box 1810, Casper, Wyoming. Closing date September 5, 1939. Entry fee \$1.00, limit four prints. September 11 to 23, 1939.

The Seventh Irish Salon of Photography. Address The Hon. Secretary, The Irish Salon of Photography, 89 Grafton St., Dublin, Ireland. Closing date September 9, 1939. Entry fee 4/6, limit six prints. September 30 to October 7, 1939.

The Third Indian International Salon of Photographic Art. Address Mr. N. B. Cooper, A.R.P.S., Honorary Secretary, Camera Pictorialists of Bombay, 243, Hornby Road, Fort, Bombay, India. Closing date Sept. 8th. Entry fee \$1.25, limit 4 prints. November 1939.

The Sixth Canadian International Salon of Photographic Art. Address Exhibition Secretary, Canadian International Salon of Photographic Art, National Gallery, Ottawa, Canada. Closing date Sept. 9th. No entry fee. Oct. 20th to Nov. 12th, 1939 and afterwards in other Canadian cities.

XV Salon Internacional de Fotografía, Zaragoza, Spain. Address Secretario de la Sociedad Fotografía de Zaragoza, Plaza De Sas, 7, Zaragoza, Spain. Closing date Sept. 15th. Entry fee \$1.00. October 1939.

The First Annual Atlanta National Photographic Salon. Address C. S. Mingledorff, 252 Peachtree St., Atlanta, Ga. Closing date Sept. 18th. Entry fee \$1.00, limit four prints. Only prints of amateur photographers will be accepted. October 1st to 15th, 1939.

Fourteenth Annual Salon of Photography. Address The Salon Jury, Museum of Fine Arts of Houston, Main & Montrose Blvd., Houston, Texas. Closing date Sept. 23rd. Entry fee \$1.00, limit four prints. Oct. 7th to Oct. 29th, 1939.

Fourth International Exhibition of Photography. Address Hon. Secretary, Windlesham Camera Club, Hallgrove, Bagshot, Surrey, England. Closing date September 20, 1939. Entry fee 4s., limit four prints. October 16 to 21, 1939.

Fourth Annual Salon of the Cedar Rapids Camera Club. Address Robert E. Campbell, Salon Sec., 2622 Country Club Pkwy., S. E., Cedar Rapids, Iowa. Closing date Oct. 1st. Entry fee \$1.00, limit four prints. Nov. 5th to Nov. 19th, 1939.

The New York Salon of Photography 1939. Address the Salon Committee, The Camera Club, 121 W. 68th St., New York, N. Y. Closing date October 2nd. Entry fee \$1.00, limit four prints. Oct. 29th to Nov. 30th, 1939.

Thirteenth Annual Open Exhibition of the Lincoln Camera Club. Address Hon. Exhibition Secretary, Miss E. Redfern, 364 Burton Road, Lincoln, England. Closing date October 7, 1939. Entry fee 1s per print. Limit four prints. November 4 to December 3, 1939.

III Salao Internacional De Arte Fotografica De Portugal. Address Gremio Portugues de Fotografica, Largo do Chiado 12,2, Lisboa, Portugal. Closing date October 10, 1939. Entry fee \$1.00, limit four prints. November and December, 1939.

Fourth Annual 100 Print Travel Salon. Address Loan Exhibition, Metropolitan Camera Club Council, Inc., 106 West 13th Street, New York, N. Y. Closing date October 15, 1939. Entry fee \$1.00, limit four prints. Season 1939-1940.

First Annual National Philadelphia Salon of the Miniature Camera. Address Charles Heller, Salon Chairman, Architects Bldg., 17th and Sansom Sts., Philadelphia, Pa. Closing date October 16, 1939. Entry fee \$1.00, limit four prints. November 11 to 26, 1939.

Tenth Annual Salon of the Pictorial Photographic Section of the Rockford Art Association. Address B. C. Norrmann, 1213 Revell Ave., Rockford, Ill. Closing date October 20, 1939. Entry fee \$1.00, limit four prints. November 5 to 18, 1939.

The Fourth Annual 100-Print Travel Salon of Pictorial Photography of the Photographic Society of America. Address Julian Hlatt, Secretary, 1776 Ohio Avenue, Long Beach, Calif. Closing date October 28, 1939. Entry fee \$1.00, limit four prints. First showing at Long Beach, California, January 1 to 31, 1940.

Third Rhode Island National Salon of Photography. Address The Salon Committee, The Camera Club of Rhode Island, 103 Westminster Street, Providence, Rhode Island. Closing date October 30, 1939. Entry fee \$1.00, limit four prints. November 19 to 25, 1939.

Eighth Annual Minneapolis Salon of Photography. Address Chairman Salon Committee, Minneapolis Camera Club, 113 South Sixth Street, Minneapolis, Minn. Closing date November 4, 1939. Entry fee \$1.00, limit four prints. December 3 to 31, 1939.

XIII International Christmas Salon Iris. Address Mr. E. Borrenbergen, 265 Dambruggestraat, Antwerp, Belgium. Closing date November 10, 1939. Entry fee \$1.00, limit four prints. December 23, 1939 to January 7, 1940.

First National Amateur Photographic Salon, sponsored by the Cultural Olympics of the University of Pennsylvania. Address Dr. Frederick C. Gruber, Director of the Cultural Olympics, 3446 Walnut Street, Philadelphia, Pa. Closing date November 13, 1939. Entry fee \$.50, limit four prints. December 2 to 18, 1939.

Springfield Salon of Photographic Art (And Pictorialists International). Address John Funaro, Director, 110 Rochelle St., Springfield, Mass. Closing date November 30, 1939. Entry fee \$1.00, limit four prints. January 3 to 31, 1940.

Second Western Pennsylvania Salon. Address W. C. Munhall, Greater Pittsburgh Photographic Society, Inc., 210 E. Park Way at Sandusky St., N. S. Pittsburgh, Pa. Closing date December 6, 1939. Entry fee \$1.00, limit four prints. January 10 to 31, 1940.

Springfield's Second International Salon of Photography. Sponsored by The George Walter Vincent Smith Art Gallery. Address Cordelia Sargent Pond, The George Walter Vincent Smith Art Gallery, Springfield, Mass. Closing date December 6, 1939. January 3-24, 1940.

Twenty-third Annual International Photographic Salon of the Camera Pictorialists of Los Angeles. Address Larry Lewin, Secretary, Los Angeles Museum, Exposition Park, Los Angeles, Calif. Closing date December 1, 1939. Entry fee \$1.00. Los Angeles Museum January 1940, M. H. deYoung Museum, San Francisco, February 1940.

Fifth Annual Des Moines International Salon of Photography. Address Walter Vitum, Salon Director, Y.M.C.A., Des Moines, Iowa. Closing date December 15, 1939. Entry fee \$1.00, limit four prints. January 1 to 22, 1940.

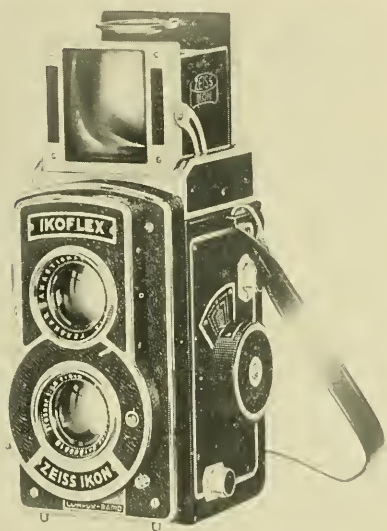
The whole photographic world mourns Anton Baumann, who while seeking a high, unusual angle shot, slipped and fell to his death. Mr. Baumann, as a representative of E. Leitz, endeared himself to photographers with his interesting lectures and splendid pictures and his work for the betterment of photography will be long remembered.

A retrospective show of prints by Edward Weston, covering the period from 1922 to 1936 and comprising 111 pictures, is being exhibited at the Photographic Arts Building, Balboa Park, San Diego, Calif., during the month of August. The exhibition is sponsored by the Photographic Arts Society, of San Diego. The show is open to the public from noon until 4:30 P.M. on Saturdays and

Sundays. Photographers should make every effort to attend this splendid exhibition.

Harry Champlin, 9488 Santa Monica Blvd., Beverly Hills, California cordially invites you to view a first showing in the West of a collection of outstanding pictures by Edward Weston, Fellow of the Guggenheim Foundation, August 15th to September 1st, 10 A.M. to 6 P.M.

Notes and Comments



The new Ikoflex III, with Tessar F:2.8 and many operating refinements, has just been announced by Carl Zeiss, Inc., 485 Fifth Ave., New York City. A twin-lens reflex, with a $2\frac{1}{4} \times 2\frac{1}{4}$ -inch negative size, the Ikoflex III is equipped with an unusually fast optical system of the quality always found in equipment bearing the Zeiss Ikon trademark. The taking lens is a famous Carl Zeiss Tessar F:2.8 with a focal length of 8cm. ($3\frac{1}{8}$ "). The finder lens is also F:2.8, with the same focal length, and it projects a brilliant image on the plano-convex focusing screen. An Albada eye-level finder is incorporated in the hood and the front element of the finder tilts forward and back as the lens is racked in and out, thus correcting for parallax and making action shots from eye-level completely practical. One smooth movement of the operating lever, simultaneously winds both film and shutter and it moves so easily that it may be used at eye or waist level without altering the position of the camera. Thus, it is possible to take pictures in rapid sequence. Double-exposures and skipped frames are impossible. Ikoflex III is priced at \$199. Announcement will be made shortly of another new Zeiss camera: the Ikoflex I, which will soon be available at a price of \$59.50.

Photo-Greet Christmas Cards offer the amateur photographer a simple way to make attractive Christmas cards and also an opportunity to turn his camera to profit. The cards are smartly designed in the French Fold style and photographs are neatly and quickly attached, making distinctive, individual cards. Full details and samples will be sent free. Write the Franklin Greeting Card Co., 1056 East 47th St., Chicago, Ill.

The Rochester Athenaeum and Mechanics Institute, of Rochester, N. Y., which offers the only three year course in professional photography at any endowed educational institution, has announced that a donor, who prefers to remain anonymous, has offered \$400,000 for endowment providing an additional \$600,000 can be raised by the Institute. The money must be pledged by Dec. 1940 but the amounts can be paid in over periods up to five years.

The famous Gross Photo Mounts, manufactured by the Gross Photo Supply Co., 1-07 W. Bancroft St., Toledo, Ohio, are available in a great variety of styles and sizes to fit the needs of any photographer. Ask your dealer to show you the Gross Mounts or send \$1.00 for a postpaid assortment to the above address.

The ban on the use of tripods by amateur motion picture photographers, which has been in force up to now, has been lifted according to the Official Motion Picture Photographers of the New York World's Fair.

More than this, the Official Motion Picture Producers are going a step farther and have invited any amateurs who care to, to shoot the nightly display of fountains and fireworks at the Lagoon of Nations on top of their field trucks and with their professional assistance.

The field trucks will accommodate from 3 to 6 cameramen and those who wish to avail themselves of this offer should get in touch with the Official Motion Picture Photographers, Communications Building, World's Fair.

P. Douglas Anderson, F.R.P.S. will again conduct photographic courses for the University of California Extension Division, 540 Powell St., San Francisco, Calif. Three courses will be given: Photography 803A; Darkroom Technique; and Miniature Cameras. The classes will be held evenings beginning Sept. 14th, at the address above and in Oakland, at 1730 Franklin St. A course in composition for photographers will also be presented, under the direction of Mrs. Leola Dixon Devlin. This course will begin Sept.

15th and will also be offered in San Francisco and Oakland. The first meeting of these courses are open without charge to those interested. Further details may be obtained from the address above.

Kodak Special Six-16 is now available with the new Kodak Supermatic Shutter, the Eastman Kodak Co., has announced from Rochester, N. Y. This shutter, formerly only offered with the Kodak Special Six-20, has speeds from 1 second to 1/400 second, and time and bulb. The Supermatic is constructed with the accuracy of a fine watch and maintains its indicated speeds accurately through a wide range of temperature conditions, by virtue of a new type of shutter lubricant developed in the Kodak Research Laboratories. Equipped with Kodak Anastigmat Special F:4.5 and Supermatic shutter, the Kodak Special Six-16 will retail at \$43 without case; \$45.75, with case.

A new **Kodaguide** for shooting both movies and stills in the home, by ordinary room light, with Super-XX film, is now offered by the Eastman Kodak Co., for only 10c. Another new Outdoor Kodaguide gives exposure data for all Cine-Kodak Films, 8mm. and 16mm., including Kodachrome. This guide is also priced at 10c.

Dr. Edmund Lowe of the Edwal Laboratories, Chicago, will address the Photographic Society of San Francisco, at the San Francisco Museum of Art, Van Ness and McAllister Sts., on the evening of August 31st. Dr. Lowe, who is vacationing in the West, will discuss his research work, for which he is renowned, in the field of fine grain developing. A cordial invitation is extended to all camera enthusiasts to hear Dr. Lowe. In addition there will be an opportunity to preview the exhibition of prints by Dr. Julian Smith, F.R.P.S., of Melbourne, Australia, to be held in the San Francisco Museum of Art.

Mico Adjustable Combination Filter Holders and Sunshades have been announced by the Mimosa American Corporation, 485 Fifth Ave., New York City. The Mico Combinations fit lens mounts of varying diameters and grip the mounts securely by means of two adjustable clamps, fiber-tipped so that there is no danger of damaging the mount. They are constructed of solid brass and finished in satin chromium. Filters are quickly inserted and removed. The Mico Combinations are moderately priced at from \$1.90 to \$2.40. The Western Movie Supply Co., 254 Sutter St., San Francisco, Calif., are Western Distributors and descriptive material may be obtained from either address.

The Schickerling Exposure Guide has been prepared by the Conrad Schickerling Research Laboratory, Orange, N.J., for use with their popular Schickerling Flood Lamps. It gives a complete list of exposures at various distances for all types of films. A copy may be obtained free from the above address.

Important information on G-E Mazda photoflash and photoflood lamps is now available in a new 4-page leaflet, being distributed free of charge, by the General Electric Co., Lamp Dept., Nela Park, Cleveland, Ohio, and by all G-E photolamp dealers. The leaflet contains the answers to the questions

most frequently asked of General Electric engineers during the past year, and much valuable exposure data.

Hyde Optical Slide Rule just announced—Henry Herbert announces the introduction of the Hyde Optical Slide Rule, a remarkable new device which gives the photographer necessary information about lenses, focal lengths, magnifications and measurements. Made of stainless steel, beautifully engraved, the Hyde Optical Slide Rule serves three distinct purposes. It contains fundamental formulae which shows how to figure anything pertaining to focal lengths, sizes of images, apertures and diaphragms. The Slide Rule takes into consideration the focal lengths of the lens and the aperture used, giving the depth of focus obtained from these facts to any magnification of the negative desired . . . thus, you are assured that enlargements of great diameter will be sharp over the entire area. And, finally, the Rule contains conversion tables which convert from Fahrenheit to centigrade . . . ounces to cubic centimeters . . . millimeters to inches . . . grains to grams . . . and vice versa. The Hyde Optical Slide Rule measures 6½ inches long, 1 inch wide and ¼ inch thick. It sells for only \$1.50, and is made in the U.S.A. Further details at your dealer, or write to Henry Herbert, 483-485 Fifth Avenue, New York City.



Bee Bee Neck-Pod

New Bee Bee Neck-Pod. This handy new minicam accessory measures only 6½ inches long when closed and extends to 12 inches. It is heavily plated with chromium and has a cleverly constructed head that holds the camera firmly in either horizontal or vertical position, as desired. It will sell, complete with an adjustable leather strap and a carrying case, for only \$2.50. Burleigh Brooks, Inc., 127 West 42nd Street, New York City, is the distributor.

New Atlas All-Chrome 3-section Tripod with Satin Finish. The new Bee Bee Atlas Tripod is suitable for use with all types of cameras, even heavy 5x7 models and cine

cameras, and is easily adjusted to the ideal height for use with reflex cameras. It has reversible feet which are pegged to one side and rubber tipped on the other. Though the legs are rigid, heavy wall construction, the tripod is extremely light, weighing only about three pounds. When closed, the legs are only 23 inches long. Open, they extend to 60 inches. The tripod is packed in an unconditionally guaranteed tubular container, weather-proofed with Skytogen, which may be used as a carrying case. The new Bee Bee Atlas All-Chrome Tripod will sell for \$7.50. Burleigh Brooks, Inc., 127 West 42nd Street, New York City, is the distributor.

New Edwal Book on Developing. The Edwal Laboratories, Inc., Chicago, has just published an interesting book, entitled "Modern Developing Methods" for the use of beginner and advanced photographers. It contains practical suggestions that help the beginner make his first pictures good pictures and it shows the most experienced photographer better ways of improving the quality of his pictures. It contains several formulas for those who like to mix their own developer. It has several interesting examples of prints, made by amateurs and prominent professional cameramen, with explanations regarding the method used in developing each type of picture. Although the information is technical, it has been prepared in a way that can be easily grasped by even those who know nothing about developing pictures. The 96-page book retails through photographic supply dealers for 50c.



Normand's New Store

A Custom-Built Fine Grain Developing Service is the feature of Normand Photo Service, a new, exclusively photographic store in Berkeley, Calif. Normand's held their formal opening on August 5th and more than 500 well-wishers attended. The new store is beautifully designed in modern style to offer its customers the ultimate in efficient, complete photographic service. A large, especially prepared wall space will accommodate a continually changing salon of fine photographic prints. Realizing that there are a great many photographers who are seeking expert quality developing for their film, Mr. Normand has inaugurated his Custom-Built Fine Grain Developing Service. "Custom," says Webster, is "done or made to order," and that is exactly the service offered by Normand's. Your film is

developed in any standard formula you order, with the same care and consideration you would give it yourself. It is vaped and returned postpaid in a dust and scratch-proof package, with a proof-strip print, for \$1.00 per 35mm. roll. Knowing that quality work depends upon the operator, Normand's will have each step in the process okayed and signed by the worker's name. Thus, this signature represents the operator's pride in his work and his guarantee that the film has been processed as ordered.

Descriptive folders are now available on two new Leitz products. the Leitz Gnome II Home-projector and the Leitz Summitar F:2 50mm. High Speed Universal Lens. These booklets will be sent free upon request to E. Leitz, Inc., 730 Fifth Ave., New York, N.Y. For the Gnome II booklet ask for No. 7838 and for the Summitar lens booklet ask for No. 1277.

Answers to "What Is Your Photographic I. Q.?"

1. Mass. Actually the calotype was the first paper negative process. The negative is made on paper and the final paper print is made from this negative. The daguerreotype, on the other hand, was made on metal and possessed marvelous detail.
2. Latest made shutters. The new Kodak Supermatic shutter has just been announced by the Eastman Kodak Company. It is designed as a between-the-lens shutter with a speed range of 1 to 1/400 second.
3. Exposure scale. This is the correct term for what is usually called the "contrast" of a paper. A paper with a short exposure scale (1-10) would be very contrasty and vice versa. Tonal scale refers to the range of light intensities possible to reproduce with tone fidelity on a given paper.
4. Left to right is the proper way to make a panorama; this is the natural movement of the eyes in reading.
5. Short. The short light rays are blue, the intermediate yellow, and the long waves red, in the visible spectrum.
6. Less. A landscape would be photographed at infinity; in a portrait or any closer-than-infinity subject, the lens will be racked further away from the film. Obviously at any closer-than-infinity point, the effective f. value of the aperture is lessened due to the increased focal length.
7. Strong sepia tone. Always use a print rich in tone quality in sepia work to secure a pure tone. Weak black and white prints will produce "washed-out" sepias.
8. The subtractive process is employed in Kodachrome film. Dufaycolor film is ruled to form a multiple filter and the image is reversed; the technique used is based on the addition of colored lights.
9. Daguerre and Niepce. In the early 1800's these two famous photographers collaborated in their work. Alfred Steiglitz is the father of "pure photography;" it was he who formed the Photo-Secessionists in 1902.
10. Light. Try photographing a red object through a red filter and you will find it to appear light in color. By way of contrast, a red object photographed through a green filter would appear dark.

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YEARS OF PORTRAITURE, PART II . . . Edward Weston

PRODUCTION TO INFRA-RED Jack Wright

DOTING THE PIGSKIN John Black

SHULLE FOR FOLKES J. T. M. M.



MYRDITH

FAR FROM THE CONFLICT AND SENSELESS WASTE OF WAR, HOW
GRATEFULLY WE TURN IN THESE TIMES TO THE WHOLESOME
FACTS OF EVERY DAY LIVING AND THE SIMPLE ARTS OF PEACE.

MORTENSEN SCHOOL OF PHOTOGRAPHY
LAGUNA BEACH CALIFORNIA



"Maudelle, 1939"

Edward Weston

Thirty-Five Years Of Portraiture

Edward Weston

Part II*

(Portraits illustrating this article were made with a 4x5 R.B. Auto-Graflex, fitted with a 10 $\frac{3}{4}$ " f:5.5 Meyer Plasmat, on Panchromatic film, developed in Pyro-Soda, printed on chloro-bromide developed in Amidol. Heads of Stravinsky and Carua Lita were made in direct sunlight, latter with sky background. All others were made indoors with window light. None were posed, even by suggestion.)

THE word *retouch* means to repair or restore. I retouch my negatives when I remove imperfections due to dust specks, scratches, etc. Since photography cannot very well be carried on in a vacuum, these flaws are bound to appear, and if the photographer wants to present clean work he must retouch his negatives and spot his prints. That is the legitimate and necessary place of retouching in photography. But when the photographer applies this technique to his subject rather than his negative, when he tries to restore the bloom of youth to a middle-aged, double-chinned dowager by removing her actual image and substituting a new one, the act should not properly be called retouching any more than the result should be called a photograph.

*In Part I of these articles Mr. Weston explained his reasons for preferring 4x5" prints for portraiture. All of the pictures accompanying this article are reproduced in the same size as the original prints. We suggest that one or more be removed, mounted and displayed as portraits usually are, so that the reader may have an opportunity to see the surprising effectiveness of portraiture so presented.—Ed.



"Esther Van Niel"

Edward Weston, 1933

I know a good many photographers who admit this. But, they say, we have to eat, so we must please the customer and the customer wants to be flattered. The answer to that is that image-retouching does not produce a flattering photograph.

I have spoken before of the importance of authenticity in a photograph; in portraiture this quality is doubly important. The chief charm of the photographic portrait lies in its intense reality, its ability to vividly represent a living person. As I have pointed out before this quality depends upon the integrity of the photographic image; and retouching the image, by destroying that integrity, robs the portrait of its most important attribute. Admittedly there is good and bad retouching; but no matter how adroit the pencil work something of the living photographic quality is lost—and too often the pencil work is far from adroit and all is lost.

Every beginner should study the portraits that date from photography's childhood. In the work of D. O. Hill he will find the quality I speak of. When he sees there what was once accomplished with the most primitive of tools—paper negatives that needed three to six minutes' exposure in direct sunlight—then he will be able to appreciate how far photography has fallen, and perhaps he may bestir himself to do something about it.

Many portrait photographers are handicapped by their steadfast belief that the camera takes the picture and that they can have no voice, or very



"Charis"

Edward Weston, 1934



"La Teresina"

Edward Weston, 1933

little, in the matter until after the exposure is made. Their aim is to make photographs without learning to be photographers. Through their efforts the process of image-retouching has been incorporated into portraiture as an indispensable ingredient:

- A. Make the negative
- B. Remove the image
- C. Substitute another image

This has come to such a recognized procedure that the words *unretouched portraits* instantly call up an unpleasant image: the leering visage on an old passport or a "modern" epidermis-map of enlarged pores and blemishes. So it is well to remember that the camera is a machine and that there must be a photographer to take the picture. The camera can flatter as well as distort, even as the violin can produce sweet notes as well as sour ones.

There can be no formula for good portraits; rules, in fact are a handicap. But the very nature of the medium suggests the best approach. Spontaneity is implicit in the photographic process. A costume piece always looks like a costume piece; a carefully posed, intricately lighted model looks carefully posed and intricately lighted. Stagey treatment fails because the photographer is unable to put anything over on his basically honest medium—his results invariably tell on him.



"Igor Stravinsky"

Edward Weston, 1935

To achieve spontaneity is the first and most important problem in photographic portraiture. To this end my own way of working has undergone various changes. I started out, as I have already told, with all the usual gadgets (though I think the "indispensables" were fewer in those days than now). As time passed my technique improved and the accessories became unnecessary; I was able to eliminate until my whole portrait equipment consisted, as it does today, of a Graflex and a background—and I don't often use the background.

The professional's first concern must be to please the sitter, and more often than not that means the results must be flattering. The photographer succeeds or fails in this task, not by the kind of camera he uses, not by the presence or absence of gadgets and accessories, but by his own personality. If he can establish the proper exchange between himself and the sitter he can make good portraits regardless of what equipment he uses. But no one can teach him how to establish this rapport. It can only come with his own growth in life, from his ability to penetrate below the surface of his subject through his own understanding and sympathy. To bring out the best in a sitter, to recognize the rare moment when the face is unmasked to reveal the inner self, and to capture that moment without hesitation—all this requires profound insight. The portrait photographer must deal in psychology without the sitter knowing it, almost without knowing it himself. He must be in complete control of the sitter at all times but the sitter must never be aware that he is.

Furthermore the photographer must learn to recognize swiftly, characteristic gestures and postures, to penetrate at a glance the reality of the person before him. And besides these things he must be a sure technician. Any fumbling or hesitation on his part is instantly felt by the sitter; his uncertainty makes the sitter self-conscious, his confidence puts the sitter at ease.

So, then, the portrait photographer's first concern is mastery of his equipment, and for his own sake as well as the sitter's this equipment should be as simple as possible. Through practice his use of it must become as automatic as breathing. Then only is he able to devote his whole attention to the person before his lens. Mastery of equipment is comparatively easy to attain. Mastery of the subject is harder. The arts of subtlety and diplomacy that must be brought into play are only perfected by experience. But once the technical complications are reduced to the minimum the photographer is able to give his whole energy to mastering this difficult aspect of the problem.

There can be no rules, no formulas, for success in this field because each individual demands different treatment. Only wide experience with all kinds of sitters can give the photographer confidence and knowledge. Experience shows him that Mrs. A. requires different tactics from Mr. B. The only rule that applies constantly is that the sitter must be unaware that any tactics are being used.

From these remarks it must be clear that my technical approach is not suggested as a model for others to copy. My method and equipment suit me personally—other photographers will have different needs. We may all walk on the same street but we require different sizes and kinds of shoes.



"Zohmah Day"

Edward Weston, 1933

Therefore, in setting down my own routine I am hoping only that it may be suggestive.

Aside from occasional 8x10 exceptions, all my portraits since 1933 have been made with a 4x5 R.B. Auto-Graflex. I have selected this type of camera because among all those available it is best suited to my special needs.

Most important among its advantages is that it allows you to see your subject right up to the second of exposure, so that seeing and recording may more nearly coincide. Since my aim is to record the spontaneous gestures and fleeting expressions which cannot be assumed to order, this first advantage would probably suffice to ensure my use of the Graflex. But there are other advantages. I need a camera that allows me to see my subject full size. Since I am not planning to perform any major or minor operations on the negative I must be quite sure that I have exactly what I want at the moment of exposure. I don't mean to suggest that I work with elaborate care. Indeed, my approach in portraiture is quite the opposite of my approach in my other work. For a still life and sometimes for a landscape, there is time to study the thing before making a decision. But portraiture is a matter of split second decisions: the sitter is never the same from one moment to the next, and out of the *moving picture* before you you must abstract the *stills* that will carry the message of the whole. I work very quickly and usually make three dozen negatives in half an hour.

I usually use the Graflex on a tripod. If the subject is an active child I am sometimes forced to hold the camera, but I dislike doing it: it is a strain on the arm, keeps you tied to the camera, and greatly increases the problem of focusing. When the camera is on a tripod I am free to move around as I choose and the camera can be kept focused on a seated subject with only occasional checking. Also, since I am rather short, the tripod is an advantage in that it elevates the camera above waist level. When I do have to hold the camera I often resort to standing on a box.

The Graflex has its disadvantages and possibly the most serious is the tendency on the part of the sitter to look up at the photographer when he is focusing and carrying on a conversation. This is an especially difficult problem for the beginner because it takes subtle hints to get the sitter's eyes back to the lens level without causing him to become self-conscious. And in the Graflex I miss two advantages of my old studio outfit: the controls for raising, lowering, and focusing, were convenient and could be quickly manipulated; the yards of rubber hose, and bulb which released a silent shutter, enabled you to be free of the camera and so take the sitter's attention from it. Until now the Graflex's advantages have outweighed these, but some day I may return to a studio camera.

I have never seriously considered the miniature camera for portraiture. I realize that it has unique advantages, but it does not suit my temperament. To me, squinting through a little peephole would be the most effective way to lose contact with the sitter, and I should never be happy with the guess-work necessary in composing, nor the extra darkroom work of enlarging, and the perils of grain, scratches, etc. When my 4x5s are developed (in a tank, 18 at a time, by inspection) it is the work of seconds to decide which are good and which must be discarded—every detail is readable. Most photographers I know who use miniature cameras have to make



"Alice Rohrer"

Edward Weston, 1933

enlarged proofs before they can tell what to discard and what to keep. Even when the face looks all right in the small negative they cannot be certain about the expression of the eyes. My present method is so simple technically, printing and developing so easy, that there would have to be advantages not yet advertised to induce me to change to a miniature camera.

At one time I experimented with artificial light, but I never seriously considered it for portraiture. More than any other one thing, artificial light produces self-consciousness in the sitter, and that is what I most want to avoid. An added reason is that I prefer the quality of daylight to artificial light. To be sure the best daylight cannot be had to order, but even the dullest day provides such a variety of lights that I can usually find what I want for any individual, any day.

One can indulge in generalities about daylight, but any attempt to formulate strict rules is useless. What worked with great success on one occasion will be your ruin on the next if you seek to repeat. Both the nature of daylight and the nature of your subject make absolute repetition impossible.

The simplest, most direct light arrangement is usually the best. For indoor work, a large window open to the sky gives the best modeling since most of the light comes from above. Sometimes the lower part of the window needs curtaining off. You can find a good light in almost any home if you look for it. One of the best portrait lights I ever had I discovered in a house I had rented. A second story room with one side window had a door opening onto an aluminum painted sunporch. The afternoon sun on the porch floor reflected a dazzling light which, combined with that of the open sky, lit the subject's face with sparkling brilliance. It was an incredibly fast light and almost shadowless.

Since a majority of my portraits are made with this straight front light the question arises: does this extreme simplification tend to impose a formula on procedures and results? As to procedure, yes, with consequent advantage to the photographer, since it makes his technical performance simpler. As to results, no. The light is the same more or less, but it is the most generally flattering light for any subject; and in this light, since there is no *effect* to be spoiled, the sitter can be allowed complete freedom of movement, so that the subject rather than the light will provide variety in your results.

When a background is necessary, the simplest and most practical kind is a plain grey one. This can be turned from the source of light to obtain any shade from almost black to almost white.

Ideal conditions for portraiture are not always to be found. The photographer will do well to practice in all kinds of surroundings and with all kinds of light so that he will know how to take best advantage of whatever circumstances offer. I often work on the shady side of a house, or under a tree whose foliage is dense enough to avoid the spottiness of filtered sunlight. The portrait of Stravinsky was made in a backyard; the background is the shadowed interior of a garage.

One of my favorite portrait lights is direct sunlight, one of my favorite backgrounds, the sky. A cloudless sky isolates the head as no solid background can; it gives a feeling that one could walk around the subject. The special quality of sunlight can be duplicated by no other means and



"Jean Charlot"

Edward Weston, 1933



"Carma Lita Maracci"

Edward Weston, 1937

its possible variations are unlimited. Between the sunrise or sunset light that renders delicate textures and subtle modeling and the dazzle of high noon light which carves features like cut stone, an infinite scale of results can be obtained.

The portrait photographer who understands his work will never seek a formula for success. Those who would simplify portraiture to a few rules and diagrams will serve you pretty cold potatoes, for the vital essence of the good portrait is too elusive to be caught and bottled. Portraiture will always be an art of discovery. No matter how much you learn from experience there is always more to be learned. The human face you want to record is not a stone or a stump; besides the changing daylight upon it, it has a changing light of its own. It is a living thing, in constant transition, now concealing, now revealing the person behind it. To translate all this to film and paper is an absorbing and exciting task that can never dull as long as you continue to approach it with an open mind.

Shooting The Pigskin

John Black

SPORTS photography is primarily a commercial-journalistic art. Whereas in artistic photography there are permanent standards of perfection, in sports photography the best picture is the picture that comes up to your editor's requirements. Different editors have different preferences in technique. There are, however, some points on which they all agree, and a shot that fulfills these basic requirements is what constitutes a good sports photograph.

A literary artist could conceivably picture an athletic contest through the medium of a sonnet, an epic verse, a novel, a short story or an impressionistic garbling of images. A reporter, however, has to stick to play-by-play reporting. That's the way it is with us sports photographers. In art photography any of a dozen types of lighting may be used. When you are photographing a football game, you want front flat lighting only. Texture doesn't count here as much as in other types of photography. Dark shadows are highly undesirable. Good composition helps, of course. But when you get perfect composition in a football shot, it's an act of God. Ordinarily I don't even crop a sports photograph for the purpose of improving its composition, because editors love to putter and they often reserve the trimming rights for themselves. Anyway, with this type of photography factors other than composition are more important. A man squatting on the sidelines of a turf field and watching a violent athletic contest in his Graflex groundglass has no time to study composition when he has to think primarily of other, more important factors. There are split-second decisions to make. There's no time to worry about grouping or texture when you have to think about action and quickly-changing focus.

Perhaps the best way to explain what that man on the sidelines has

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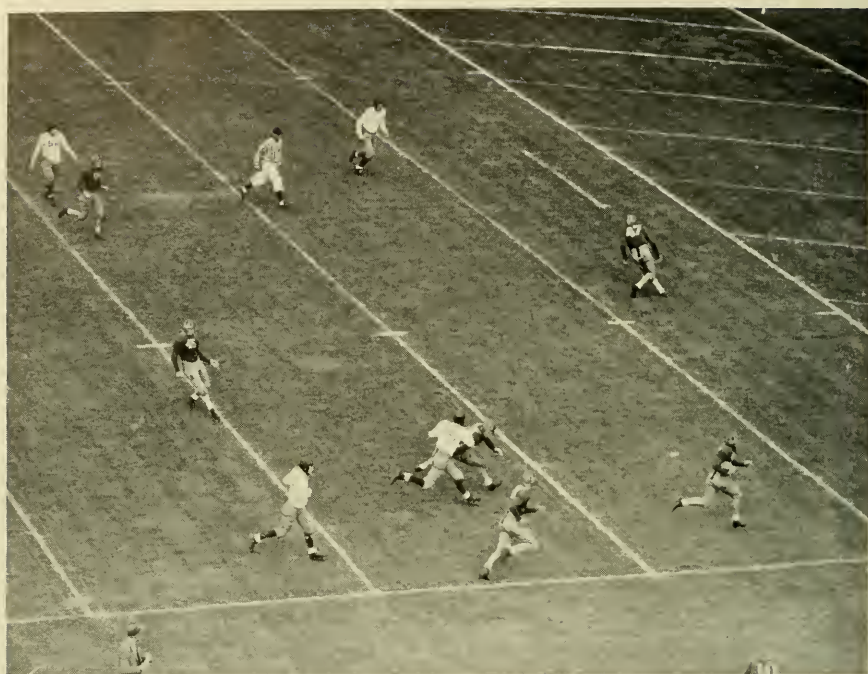


Figure 1

John Black

This cause-and-effect shot from the press box plainly shows that the California Aggie team was taken off guard when Jerry Lutes of the University of California intercepted an Aggie pass. California's excellent blocking shows up well, too.

to think about before taking his shot is to list the things an editor usually looks for in a football picture. Here they are:

1. Good contrast
2. Sharpness of focus
3. The football in the picture
4. Action
5. Importance of the action in the outcome of the game

Since those factors are the ideal ingredients of a published football picture, they are therefore what have come to be accepted as the standards for a good football picture.

In my experience as a photographer of University of California football games I have found that the best combination of equipment is a Graflex camera with Agfa Suprepan Press film. My favorite lenses are the 10- and 20-inchers. For football the ideal shutter speed is ordinarily 1/1000 of a second. When it rains, as it did during the 1937 Big Game, good pictures print up with a shutter speed as slow as 1/200. However, in a



Figure 2

John Black

What makes this shot valuable is the expression of alert determination on the faces of California's Elmore (49) and Smith (86). Players in the background are College of Pacific men.

case in which the shutter speed is so low, I usually take a much greater number of pictures than ordinarily, because the chances of stopping fast action are few. With the change of light on a normally sunny winter day as the afternoon grows older, some photographers change shutter speed and leave the diaphragm opening constant. For accurate action recording, however, I prefer to change the lens opening and keep the shutter speed as constant as the light will allow. The lens opening on most of my shots is $f:11$. Of course, as light diminishes, I sometimes open the diaphragm as high as $f:4.5$.

The perfect football picture is probably the technically excellent (in the small scope of focus and contrast) shot of a winning touchdown—the picture to have three or four figures in violent action, and the man with the ball off the ground in a dive or fall. That last is an important consideration. The intense interest of mid-air action is the reason for the publishing of so many pictures of pass-catching football players.

The trend in sports shots these days is, I think, to get them from above. (See Figure 1). This angle doesn't get facial expression so well as the sideline shot (Figure 2) but it brings movement out more understand-



Figure 3

John Black

From the stands in the end zone John Black got this excellent picture of Bottari's touchdown against U.C.L.A. Leading blockers on this play were Smith (on ground at left), Anderson (on ground, center, and taking out U.C.L.A.'s Sutherland and Fenenbock), and Queen, sprawling on top of Anderson.

ably. For all shots from the stands or the press box I find the 20-inch lens best. Naturally, this sort of picture is never a close-up. It's frequently almost panoramic in scope, and so I've found that a fine-grain developer is very handy. With Edwal 12 I have never had difficulty getting the play up to a 20-inch print suitable for printing in an eight-column newspaper spread. For the closer shots from the sidelines, a regular DK-50 commercial developer is eminently satisfactory. My developing time with the Edwal 12 and Agfa Superpan Press is twelve minutes; with the DK-50 it's six minutes.

A better position than the press box for the 20-inch lens, during certain vital parts of the contest, is in the corner of an end zone in a stadium, about 25 rows up. When I have a hunch that one of the teams is getting hot and is liable to score soon, I race up into that spot in the corner of the end zone and get a clear, understandable picture of how the touchdown was made. (Figure 3). That's what sports editors cry for—cause-and-effect pictures. They like to be able to point at a print and say, "See, perfect blocking by that man helped So-and-So to make a long gain. But if this man here hadn't missed his tackle, the play would have been broken up."



Figure 4

John Black

Once in a lifetime a photographer gets a human interest picture as good as this one of Stub Allison, who is helping a member of the California team in getting off a punt.

This end zone position is also better than the press box because you cut down your distance by about half, and get bigger images.

If you bring the 20-inch lens down on the field, you can get most of the playing area in, whereas with a lens of shorter focal length you have, more or less, to wait for the play to come to you. However, a 10-inch lens is very capable. This matter of waiting for the play to come to you is a real consideration. It's the reason I prefer a Graflex to a Speed Graphic for this type of photography. With a Graflex it's a simple matter to follow the play and keep it in focus on the groundglass at all times. The picture can be taken almost at any time the photographer is minded to take it. With a Graphic it's necessary to pre-focus and wait until the action comes into range.

Naturally, there are certain disadvantages to the Graflex. There always are to everything. With this type of camera, football shots have to be anticipated. If you wait until the action you want is taking place, you'll miss your shot. Why? Because of the lag between the time the Graflex mirror goes up and the curtain goes down. In the Speed Graphic the mirror is done away with and there is no such time-lag.



Figure 5

John Black

California's Dolman and two College of Pacific players have just missed a pass here. With great expressiveness these players form an almost perfect circular composition.

With my Graflex, however, I've been able to do away with the time-lag to a certain extent. I have attached two strong, taut rubber bands from the mirror arm to the front of the camera. This device affects the mirror so that when it once starts to move, the ascent gets added momentum by the pull of the rubber bands. I should advise others who would try this device of mine to be very careful. Too much pressure on the bands may crack the mirror. I have never had any such accident, but I'd hate to be responsible for encouraging one like it.

Many people have asked me whether I have any trouble keeping the people in the background stands blurred out, so that the main figures of the picture are not detracted from. Using the equipment I have described, I never do have any such trouble. With a 10- or 20-inch lens the stands are necessarily out of focus anyway. The main figures stay clear, the background gray and soft, and the action legible. There is nothing to worry about unless the action you are aiming at is across the field—and it's a good idea to forget action on the other side of the field unless it's vitally world-shaking in its significance.

Besides the action pictures, there are a few other interesting sidelights that make interesting newspaper copy. There are the rooting section stunts. There are the wildly collegiate alumni with their pretty girls. There are the



Figure 6

John Black

Novelties in the way of queer-looking action catch the eye of every sports editor. Here's an example from the last Rose Bowl game. Player in the foreground is Kilgrew of Alabama. Behind him Schwartz of California has just caught a forward pass, while Holm of Alabama engages in dangerous gymnastics while trying to steal the ball.

little kids at the game. Most engrossing of all to me, and the kind of picture I like best to take, are those I can get of the expression on a coach's face when his team is in a hole. (Figure 4).

One last word—perhaps a little on the mercenary side—for readers who are going to try their hands at sports shots. Remember that an athletic picture is not worth the paper it's printed on, as far as a sports editor is concerned, unless it has a completely informative caption. The best way I know of for keeping track of your captions is to have a sheet of paper taped to the side of your camera, with numbers beside which you can jot all the necessary caption information. The numbers should correspond to the number on the back of the film sheath, if you use a magazine, or plate holder if your camera is a Speed Graphic. These notches must then be carefully examined in the dark room. It's a tough method at first, but you get used to it and it becomes automatic. And it's very worth while, I find. Most photographers can't merely trust to their memories for caption information after working through a thrilling game during which they have gotten almost as much exercise and almost as many bruises as the players themselves.

Introduction To Infra-Red Photography

Jack Wright

INFRA-RED photography has not had the number of adherents among amateur photographers which it deserves because for years the infra-red emulsions were obtainable only on glass plates and comparatively little was known about exposure times for such plates. Recently, however, several film manufacturers have issued infra-red film in the 35 mm., $2\frac{1}{4} \times 3\frac{1}{4}$ and other popular sizes and, with the advertising which has accompanied the issuance of these films, thousands of amateurs have lately added infra-red photography as a new and absorbing department of their activities.

Beyond each end of the visible spectrum there are emanations which are not visible to the human eye but which affect photographic emulsions. Above the violet end of the spectrum are rays of still shorter wave-length, known as ultra-violet rays. Lenses and filters for dealing with these rays photographically are complex and expensive—usually beyond the means of any except workers in large laboratories.

Below the red end of the spectrum are rays of longer wave-length known as infra-red. They are not visible to the eye but they do affect photographic emulsions in most interesting ways and can be employed for photography with an ordinary lens and camera. It is photography by means of these infra-red rays that this article will discuss.

The aim is not to discuss the physics of infra-red but to introduce to it the amateur who has not previously made pictures by its use.

In the course of this introduction the following questions will be answered: Why take infra-red pictures? What film should be used? What filter? What exposure times? What film developer? What paper? What paper developer? What type of picture is best suited to infra-red photography? What are the possible errors and pitfalls?

The reasons for taking up photography by infra-red are several. These rays are not affected by haze which, at the lower altitudes, often makes



Jack Wright

Taken with Super Ikonta B camera, 1/50 at F:4.5. Bright sunlight.

ordinary photography difficult or impossible. The first use of infra-red, therefore, and one for which these rays are still much employed, was for astronomical and geographical photographs and for other photographs taken at long distances. For this purpose the infra-red is unapproached. However, there are other uses of greater interest to the average amateur, the principal one being the taking of photographs of landscapes, many of which appear with a strange and almost unearthly beauty, not found when they are photographed in the ordinary way.

The absorption or reflection of infra-red rays does not behave like the absorption or reflection of ordinary light. The sky and water do not reflect infra-red rays—hence both are rendered practically black. Clouds, on the other hand, reflect the rays and are rendered in a brilliant and often luminous white.

Most coniferous trees reflect infra-red only moderately and hence usually show up naturally, while deciduous trees, palms and many other varieties, the foliage of which contains chlorophyll, reflect the light and hence are rendered almost pure white. Lawns and shrubery, likewise, are shown almost white.

The reason for taking photographs by infra-red, therefore, is not only to cover great distances but to render landscapes and some other scenes in a new and sometimes exceedingly beautiful aspect.

The reasons for taking pictures by infra-red having been established, we turn to more detailed technical considerations, such as film, filter, exposures, etc.

The Eastman, Agfa and Dupont Companies all put out infra-red film in the 35 mm. and other popular amateur sizes and at prices which approximate the cost of ordinary film. Ask for infra-red film in the size appropriate to your own camera. The writer has used Eastman's $2\frac{1}{4} \times 3\frac{1}{4}$ film in a Super Ikonta B camera quite successfully. The film is designated merely as infra-red and yields eight exposures $2\frac{1}{4} \times 2\frac{1}{4}$ per roll. No doubt the film put out by other companies is equally satisfactory.

In regard to filters, there are a large number which may be used successfully, including the following Wratten filters: No. 15, No. 25, No. 70, No. 89-A and No. 88-A. Of these the Wratten 25 is particularly satisfactory and can be used not only for infra-red but with ordinary panchromatic film.

In the matter of exposures, most amateurs who work with infra-red use $1/25$ at $F:5.6$ in bright sunlight as their basic exposure. One second at $F:32$ makes very satisfactory exposure, where a tripod is used. It is best to allow full exposure, and some will prefer $1/25$ th at $F:4.5$ as their basis, this giving a better-timed negative, in many cases.

Since infra-red rays do not follow the same rules as ordinary light, there will often be as much or more infra-red reflected from a scene on dull days as on bright ones. The beginner, therefore, will do well to employ $1/25$ at $F:5.6$ or $F:4.5$ for all his early exposures, until he learns his way 'round, so to speak, and gains a little experience.

The roll of film having been exposed, it is now to be developed. This can best be done in a tank, which must be loaded in total darkness. Almost any standard film developer can be used. The writer has found 16 minutes development in D-76 quite satisfactory. This developer can be purchased



Jack Wright

Photographed with Super Ikonta B camera, 1/5th second at F:12.7. Bright sunlight.

from the Eastman Company in package form or can be mixed by the following formula:

Water at 125 degrees F.....	96 oz.
Elon	116 grains
Sodium Sulfite.....	13 $\frac{1}{4}$ oz.
Hydroquinone	290 grains
Borax	116 grains
Cold water to make.....	1 gallon

The film having been developed, fixed and dried in the ordinary way, we now come to the matter of printing. As to paper, the writer has found Eastman's Kodabrom or Afga's Brovira very satisfactory, but any good paper may be used.

Most infra-red negatives tend toward contrast but are almost completely lacking in shadow detail. A medium paper will usually be best, although some negatives yield snappier prints on a hard paper. A little experience will enable the photographer to fit the paper to the film very readily.

In discussing what type of picture is best suited to infra-red photography, it is obvious that landscapes which include sky, clouds, trees and water will be best. Photograph a street scene by infra-red and you will get a harsh, contrasty picture with chalky whites and detail-less shadows—utterly unpleasing. Photograph a landscape including clouds, some trees, perhaps a building and possibly a sheet of water, and the result may be a pictorially pleasing photograph.

The photographer must learn, however, to think in terms of infra-red and to look for possible pictures in these terms. Failure to do this constitutes the principal pitfall into which the amateur taking up infra-red may tumble.

Do not load your camera with infra-red film and go out snap-shooting like a schoolgirl with her first Brownie camera. If you do you will be greatly disappointed with infra-red photography and may not return to it. Portraits, for instance, are very unsatisfactory in infra-red, the skin textures being chalky, the lips light, eyes black dots and every line of the face exaggerated.

Street scenes are harsh and contrasty, with little or no detail in the shadows. Many other pictures which would be pleasing and satisfactory with ordinary film are displeasing in infra-red.

For your first experience with infra-red film, therefore, go into the country, if you can, or to a city park. Select a scene containing sky and trees—and some clouds if possible. Include some shadows—but not too many. It may be best to go back to the old snapshooting rule of “the sun at your back,” at least in the beginning. Study particularly the angle at which the infra-red rays are reflected, because this angle is the determining factor in recording detail.

After you have exposed a roll of infra-red film, study the prints observantly and intelligently, taking note of how various kinds of trees photograph, the manner in which buildings show up, rendition of water, sky and clouds, etc., etc. Infra-red photography demands study—and repays it.

It may be amusing to go around shooting unpredictable pictures and never knowing, when you make the exposure, what the print will look like.



Jack Wright

Monterey wharf. Taken with Super Ikonta B camera, F:5.6 at 1/25th second in bright sunlight.



Jack Wright

Vista of Lake Tahoe on Nevada side; blue water becomes almost black. Taken with Ikonta B camera, 1 second at F:29; bright sunlight.

That is not, however, the way to take good pictures—in infra-red or any other medium.

Principal danger of lack of study and attention lies in misuse of shadows. Shadows have their place in infra-red, as in other photographs. However, if too great a portion of the picture is taken up by detail-less shadows, the picture is not likely to be a pleasing one.

Another possible pitfall lies in lack of thought and study in making prints. Even a well-exposed infra-red negative requires more care in printing than an ordinary negative. If the chalky whites are to be avoided and if what little detail there is in the shadows is to be retained, care and thought are required.

Another factor which must be noted is whether or not compensation must be made, with any particular camera, for the fact that infra-red rays are longer than those of ordinary light and therefore focus a little further from the lens. In the case of most miniature cameras the great focal depth of the lens makes compensation unnecessary. With lenses of longer focal length or extreme close-ups it may be necessary to move the lens out just a little to secure sharp focus, the distance moved being about 1/200th of the focal length. A little experimenting will determine whether or not this

is necessary with any particular camera, and in most cameras it will not be required.

Another thing to be watched is to secure film that is as fresh as possible, as infra-red film loses some of its speed with age. If the film is old, or if greater speed is required, infra-red film may be hypersensitized by soaking for two minutes in a solution made up of 2 cc of ammonia (0.91 specific gravity), 275 cc of alcohol and 725 cc of water. The treatment must be carried on in complete darkness and the film must be dried as rapidly as possible.

It may also be noted that infra-red film may be used without a filter, just as ordinary film is employed. Used this way it is fairly fast, with a Weston speed of about 30*, but tends toward extreme contrast and should be fully exposed, then slightly under-developed. The fact that the film can be used at ordinary shutter speeds without a filter is useful where 35 mm. film is being used and where it may not be desired to take all 36 pictures in infra-red. Remember, however, that if the infra-red effect is desired the filter is essential.

For the amateur who is willing to use a little thought and care in selecting his scene, who is willing to develop his film carefully by time and temperature, and who is willing to use a little more than usual care and thought in printing, infra-red offers a brand new field of photographic interest and beauty.

*This is the author's estimate—not an official Weston rating.—Ed.

Blackening Brass

Jean Hillerz

THERE comes a time in the career of almost every enthusiastic “shutter snapper” when he would like to know how to apply a new black finish to the worn brass parts of his camera equipment. Or for that matter, if he likes to build gadgets he will probably find himself knee-deep in this problem shortly after he makes his first contraption for a camera. By the way, a new blackening job helps a great deal when the time comes for trading or selling the “old faithful” but slightly worn camera.

For most purposes the use of paint on the brass parts of a camera is out of the question, so let's get down to the business of applying a new chemical black finish.

When the uninitiated sets out to do the very simple task of tidying up his camera equipment with a new blackening job he is confronted with a bewildering array of methods to choose from. Now, strange as it may seem, a very large percentage of these processes are quite excellent. Unfortunately, in many of the cases the formulas as they appear in the literature are set forth in a very brief form. It is this lack of explanation which so frequently produces unsatisfactory results from an otherwise very satisfactory method.

No attempt will be made within the scope of this article to propose any new methods, but rather an effort will be made to give the necessary explanation to the existing processes.

From the amateur's standpoint, practically all of the methods for blackening brass may be divided into four large groups: (1) Those which employ a solution and an electrical current; (2) Those which employ the use of hot solutions; (3) Those which employ a solution and apply heat directly to the metal part, and (4) Those which employ a solution at room temperature.

(1) The first method is hardly worthy of consideration for the amateur photographer because it requires a somewhat elaborate "set up" and demands a fair amount of skill to control it during the process.

(2) The second method is used to a large extent in factories and machine shops, and is readily adaptable to the facilities of the amateur. It is usually carried out in the following manner: The brass part is thoroughly cleaned of all paint, grease, etc., by any convenient process, such as scraping, buffing, applying chemical solvents, etc. In all cases, however, the cleaning process should be finished by washing in warm soap and water, followed by a thorough rinsing in clean warm water. In order to bring the metal surfaces to a uniform temperature throughout, the article is then submerged in boiling water for about three to five minutes depending on its size. This is a very necessary step which is all too frequently omitted, with mediocre results in the end. After the article has reached the temperature of the boiling water, it is submerged for three to five minutes in a hot (150° to 160° F.) blackening solution composed of $\frac{3}{4}$ oz. sodium thiosulphate, $\frac{1}{2}$ oz. lead acetate, and 1 pint of water. If at the end of this time the depth of color is not sufficient, the article is again placed in the boiling water for three to five minutes and again in the hot blackening solution for three to five minutes. This process can be repeated until almost any desired depth of black is obtained. The article is then washed thoroughly in warm water and dried. A good rubbing with a soft rag will remove any loose deposit and leave the surface a rich, velvety black.

There are at least a dozen or more other formulas which can be used hot and which will work equally well. However, the reason for selecting the formula given above is that the chemicals can be very cheaply and easily obtained, and are not particularly dangerous to handle. Just don't drink them and their use will not bring you harm. The sodium thiosulphate (photographic HYPO) is a stock item in every photographer's darkroom and the lead acetate (sugar of lead) can be purchased in almost any drug store.

There is one precaution to be stressed before leaving this method.

Don't try to save the solution for any length of time; it is much cheaper in the long run to make up a fresh batch for each job.

(3) The third method is one which, while not recommended for the amateur, is discussed here so that by knowing about it, its pitfalls can be avoided. The thoroughly cleaned piece of brass is submerged for about thirty seconds in a fresh solution composed of $\frac{1}{4}$ oz. copper nitrate, $\frac{1}{4}$ oz. silver nitrate, and 2 fluid ozs. water, at room temperature. It is then removed from the solution and allowed to dry completely. When thoroughly dry it is heated to almost red heat, whereupon a rich black surface develops.

As suggested above, this method is not recommended for the amateur, although the blackening process itself is simple. The difficulty lies in the fact that the operator must have a knowledge of the physical properties of the brass with which he is working, so that the hardness of the metal is not changed during the heating and cooling process. For example, if a "lens shade" made of spring brass were blackened in this manner, the finished article would in all probabilities not be very springy when finished unless the heating and cooling process is carried out under closely controlled conditions. It cannot be too strongly emphasized that this method should not be used by the amateur on any brass parts that are subject to wear or contain any amount of spring. The manufacturer of that part undoubtedly selected a brass of the correct hardness to withstand a reasonable amount of wear. If that hardness should be changed by improper heat treatment, the life of that part or the life of the part which it is acting against would be materially shortened. The other serious drawback to this method is that a brass part which has had a considerable amount of machine work done on it in its manufacture may warp during the heating and cooling operation. Oh! how any of us would hate to have one of the pieces of our "old faithful" camera warped to the extent that the optical system would be thrown out of alignment. This method usually proves to be a "grand headache" for the average camera lover, hence its use should not be attempted unless the operator has a knowledge of the heat treatment of brass.

(4) The fourth method is one which is admirably suited for the amateur photographer who has only an occasional blackening job to do. In carrying out this process, the article is cleaned as previously described except that in this case it is not quite so necessary to remove all traces of grease because one of the chemicals in the blackening solution is a good solvent for most greases and oils. The cleaned part, at room temperature, is submerged for about five to ten minutes in a blackening solution, also at room temperature, composed of 16 fluid ozs. ammonia water and 1 oz. copper carbonate. If the depth of color is insufficient at the end of this time, it should be returned to the solution for an additional five to ten minutes. This solution should be made up fresh for use as it will deteriorate in about a day's time.

Again, the reason for selecting this formula to represent the fourth group is merely the fact that the chemicals can be cheaply and easily obtained. The copper carbonate can be obtained from the local druggist, while the ammonia water can be purchased in any grocery store. The variety of ammonia usually employed for housecleaning purposes is admirably suited for this formula.

Cinema Section

Edited by

William A. Palmer

Formulae For Follies

J. T. Mullin

THE amateur movie enthusiast who has followed the accepted routine of photographing the family, his friends, the children's birthday parties, his golf game and the family picnic last summer, may well wonder, unless he has taken the necessary steps toward editing his pictures, why the audience enthusiasm of the first few minutes of projection quickly wanes into silence. If he is still undaunted after the first reel, he may, in succeeding ones, catch glimpses of stifled yawns or eye rubbing procedures during transient flashes of reflection from the screen as Junior, in crisp white trousers and shirt, pedals repeatedly past the camera on his new bicycle.

It is not the purpose of this article to prescribe cures effective at the source of the trouble. These prescriptions have been enumerated elsewhere. Rather, this discussion will be confined to prescribing formulae of the "cup of coffee" variety, which while not making up for lost sleep will, it is guaranteed, keep an audience awake and interested until the home projectionist can get around to making those little changes for the better here and there in his family pictures. At the same time he will have found films of the type to be discussed indispensable henceforth in his programs.

With the current abundance of talented entertainers at our two great fairs as well as elsewhere in their immediate vicinity the idea of photographing some part of one or more of these performances suggests itself as an interesting note of variety offering great entertainment possibilities on the home movie screen, yet requiring a minimum of effort on the part of the photographer.

Whereas, the discussion following is limited to a specific example, the factors pointed out and details discussed as well as the procedure for photographing followed herein may well apply to such shows as the "Cavalcade of the Golden West," and the "Folies Bergere" on Treasure Island or the "Aquaecade" of the New York Fair, to mention but a few.

The example in this case is a two hundred foot 16 mm. film taken recently at an Ice Follies production in San Francisco. To central Californians the brilliant performances of many of the world's finest ice skaters in this show, presented in Winterland Rink, proved to be a thrilling innovation in entertainment. Enthusiasm for it ran "tops" whenever entertainment was discussed. Here was just the sort of subject which, if made reproducible at will in all its natural color, would provide home entertainment interesting to all. Those who had seen the show would find interest in reviving their recollections of it. Those who had heard of it only would be able to satisfy their curiosity. The film might possibly prove nearly as entertaining as the actual production.

The cinematographer was sold! But wait—how about lighting? Would it permit the use of Kodachrome, or would it require the extra speed of Super XX? What about distances from the subject, and how would one know when some particularly fine camera opportunity was about to appear? All these questions, after considerable pondering, seemed to point to but one immediate answer. First see the show sans movie equipment.

In the case of this show, it was a good guess that, from the nature of the lighting in Winterland Rink, given a lens of $f:1.9$ speed or better, it would be entirely possible to get good Kodachrome pictures.

The lighting in nearly every act was supplied by incandescent flood lights which covered the rink with a solid field of amber, red, blue or white light, while the central figures and soloists were in most cases brilliantly illuminated by arc spot lights directed down at the performers from locations in the four corners of the building, high above the rink. Since these were of considerably greater brilliance than the floods, it was evident that any camera with an $f:1.9$ lens would at least be able to capture this most important action. Kodachrome was obviously excellent camera fuel.

The frequent use of full white floodlighting, alone or in conjunction with the arc spots dictated the use of Type A Kodachrome. While the arc lights used as spots had definitely a bluer cast than the incandescent illumination and might on first thought seem to call for regular Kodachrome, it must be borne in mind that under artificial lighting the eye judges colors by relative comparison to those in the principal illuminating source, which in a case of this kind is incandescent light. The arcs, therefore, appeared slightly blue to the eye by comparison with the flood lighting and should appear likewise to the film. If regular Kodachrome were used, the projected pictures would accept the arc lights as a standard of whiteness, thereby making the floods reddish by comparison. The projected pictures would seem wholly unnatural in color rendition. A second, and equally important reason for the choice of Type A film is the fact that under

these lighting conditions the film is considerably faster than Regular Kodachrome would be.

How about lens and camera speed requirements? To play safe it was decided to use an $f:1.5$ lens wide open. It was believed, and later substantiated, that an arbitrary focus covering the estimated distance to the principal center of action would suffice for all shots. At the same time the $f:1.5$ setting, while at times possibly too great for perfect exposure of arc illuminated subjects, would bring out the detail in supplementary action, the details of the rink, relative location of the audience and such minor factors as might help to locate the center of action and round out the picture. It later proved that solo shots in which all lighting except the spots was extinguished, lent desirable variety to those in which the background was well illuminated.

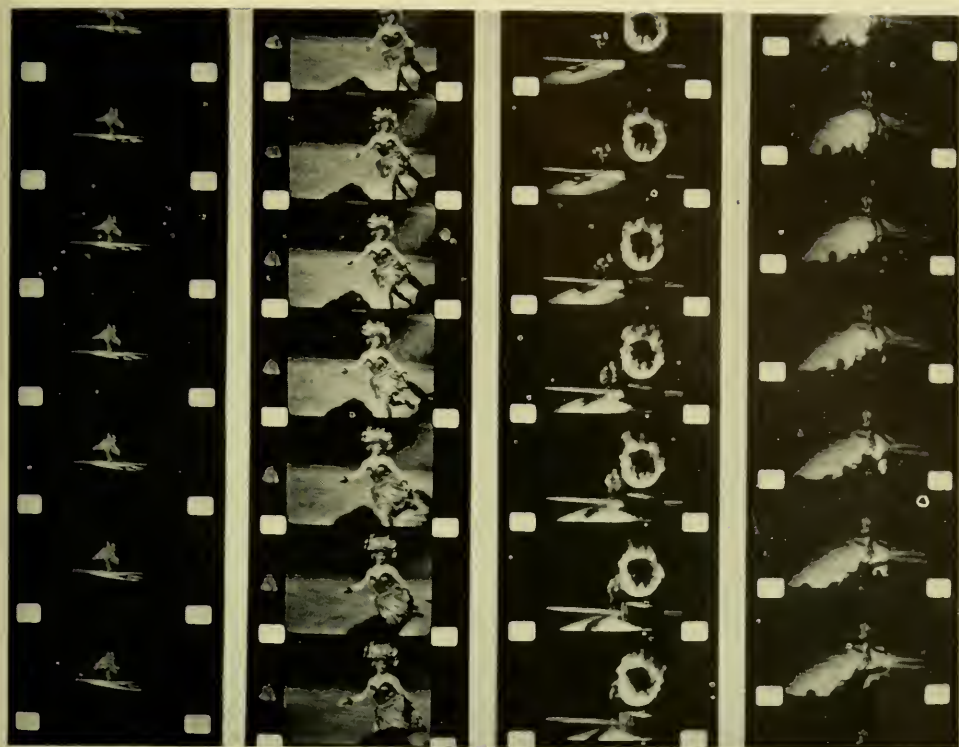
One point concerning exposure was made a rigid rule as soon as the first performances were observed—that no choice of camera speed other than standard sixteen frames per second could be tolerated in order to improve exposure. The action at an ice carnival is such that unless projected again at the speed it is taken all motions seem unnatural and peculiarly ungraceful. One exception to this rigid rule for camera speed where a smaller lens would be employed could be made for those with adjustable speed governors, who might approximate twelve frames per second, thereby gaining some exposure but simultaneously limiting their projector speed to twelve frames instead of sixteen when showing this particular film. Such procedure might be found to introduce surprisingly little flicker upon projection since flicker becomes increasingly noticeable not only with decreased projector speed but also with increase of exposure of the film being shown. Since this would not be likely to be over-exposed, the flicker would in all probability be unnoticeable. The use of an eight frame exposure button on the other hand could never be permitted except to photograph audience reaction where the extra speed on projection at twelve or sixteen frames might well pass as an unusually enthusiastic response.

So it was that within the first few minutes of witnessing the Ice Follies the heavier questions were decided. Since the performers constantly changed their distances with respect to the camera position, a general range of focus estimated as accurately as possible to the center of activity should prove satisfactory. As for camera position, it seemed advisable to procure a seat on the aisle so that one could slip into the aisle when photographing in order to avoid interference by those sitting in front of the camera.

The next question, a big one, requiring the remainder of the evening to answer, but indeed a pleasant one to ponder over, was: what to shoot?

Since this was a program of twenty different acts it would be impossible to photograph a snatch of each and still have more than a disjointed whole. As each act was concluded, therefore, it was given a tentative rating in the program, brief notes being scribbled to indicate certain highlights of the show which would be essential to the finished picture.

After the show it was decided that two hundred feet of sixteen millimeter film would just about round out the complete subject, this length being chosen since it would leave the spectator interested in seeing the film again at a later time rather than fully appeased. Any less, however, was felt to be insufficient to do justice to more than a minimum of acts. Thus, still marking up the pro-



gram for the evening, arbitrary footages adding up to a total of two hundred feet were assigned the most interesting subjects.

Returning a few nights later with camera and film, the pictures were taken. Long shots of action known to be most interesting were taken whenever possible. As long as the action was continuously interesting the button was held down. Whenever possible the camera was started before a certain spectacular routine was begun, and was kept running until it was well completed. At first it was actually found difficult to keep from overrunning the schedule of film footages assigned, but bearing in mind that they were chosen on the basis of relative overall merits of the acts involved, the tendency to overshoot on any particular subject at the moment was curbed and the film was finished on scheduled footage.

In photographing a subject such as this it is necessary to do a great deal of panning to keep the swiftly gliding and gyrating figures always in the center of the finder. They should never be allowed, during a continuous take, to dart out one side of the picture merely because the cameraman did not swing fast enough to follow the action. Here is one instance where fast panning is necessary, but in this case it is done to make the relative motion between camera

and subject as little as possible, the background being the fastest moving factor as far as the camera's view is concerned. If it were not for the background, it might at times be difficult to tell how fast or in what direction they were going. Occasionally it was found that as the four spot lights followed the performers, a brilliant reflection would be directed from the surface of the ice into the lens of the camera. But such shots were found to actually add considerable to the life and sparkle of the finished film.

It was entirely feasible to get into the aisles and do most of the photographing from them, changing positions from the very edge of the rink where interesting low angle shots could be made to many other locations between these and positions behind the audience in the far corners of the building where practically the entire rink could be gotten into the field of the camera. These changes of location not only added interest to the film by the variety they lent, but they also served admirably to include in the angle of the lens just the right amount of area to photograph a complete ensemble or a solo number.

Clown acts, interspersed with those of more serious nature helped round out the film just as they did the actual performance. Audience reaction taken during both types of entertainment (taken at eight frame speed in order to improve exposure where the illumination was considerably less than that directly over the rink) was later spliced into the film at the most logical places to tie various acts together nicely, and add a professional touch. These refinements, together with titles, made a truly complete reel of film to be included in an evening of home movie entertainment.

Exposure at $f:1.5$, while occasionally a bit too great under the intensity of the arc spots, resulted in completely satisfactory pictures and pointed to the possibility of using an $f:1.9$ lens with great success.

A word might be added in general, concerning titles for a picture of this nature, and more specifically to the titles actually made for this film. Since this picture is a unified whole consisting of a series of subjects, few, if any, of which will be featured more than one minute on the screen, it is not wise to introduce each new act with a separate title. A general explanatory title following the main title, giving a little information applicable to all acts, should prove sufficient. The author prefers, in addition to the regular opening and ending titles, the use of talking titles reproduced from a portable combination recording and reproducing machine capable of making and playing phonograph records. Several concerns are producing a complete unit selling around the price of a good projector and requiring no technical skill to operate. Such a machine is a fine investment for the movie maker since it permits a world of information to be given concerning the film while it is being projected and simultaneously adds an additional professional touch to the finished picture.



"Gone with the Wind"

Axel Bahnsen
Yellow Springs, Ohio

First Award—Advanced Class

■ This picture is, of course, built upon the series of beautiful curving lines formed by the profile and repeated by the hair and the hand. These elements are arranged with a very sure touch and the result is thoroughly delightful. We would like to see a broader base in support of the head. If, for example, the line of the shoulder could be carried out so that it would cut the left edge of the print a considerably more stable composition would result. We realize, of course, that if the model's right arm were moved outward to carry out the above suggestion that this might seriously interfere with the present fine linear relationships. The line of the shoulder would be altered slightly, and it would no longer be possible to use the hand to repeat the linear motif. Consequently no such simple adjustment of the pose is possible without losing more than we would gain. It is true, of course, that the head is held in place by being tied into the upper and right edges of the print, and we do not feel that the present arrangement is disturbingly unstable. At the same time if some means could be discovered for filling in the lower left corner, the composition would be given a "finished" appearance that would be most satisfying.

Data: 11 x 14" bromide print.

Second Award

Advanced Class



"Early Morning Calm"

John W. Riley

Chicago, Ill.

the print or by dodging in, the figure would then be lost against the background. The print is admittedly very grainy, due, no doubt, to great enlargement from a small portion of the negative. Under such circumstances we would be content with a much smaller print and would work for the pearly tones and smooth gradations which are appropriate to the mood of the picture. If the grain disappears with less enlargement we think this picture would appear to best advantage on glossy stock, for that paper will best represent the smooth surface quality of still water.

Data: Zeiss Super Ikonta B; 1/10th sec. at F:5.6, on E. K. Super XX, in Edwal 20; 11 x 14" print on E. K. Opal, in D-52.

Third Award

Advanced Class



"6th St. Bridge"

R. F. McGraw

Sierra Madre, Calif.

■ In this picture we find rather commonplace material handled with a very sure touch. It is plain that Mr. McGraw has selected his point of view so as to obtain a pleasing pattern from the bridge structure. That is the main objective, of course, but if that were all, the picture would be rather ordinary. What really makes the picture "sing" is the subtle relation of tone values. It is the very exact adjustment of the tone values of the bridge girders, the sky and the white building in the distance, that permits the eye to see these in their proper relationship to the composition. If the sky were darker some of the force of the pattern created by the bridge structure would be lost; the distant building would assume much greater prominence and would come forward, with a consequent loss of aerial perspective. If the sky were lighter the building would be lost, and the feeling of depth in the picture greatly decreased. Too many photographers, we believe, think of composition primarily in terms of line and mass, forgetting the great importance of exact tonal adjustment.

Data: 2¼ x 2¼" Korelle Reflex; 5¼" Zeiss Tessar; E. K. Panatomic X in D-76d; 8 x 10" print on E. K. Kodabrom F (glossy) in D-72.

Fourth Award

Advanced Class

■ When the photographer is dealing with translucent material it is almost always an advantage to adopt backlighting, for this imparts a luminosity to the print which adds much to the interest value. It is that quality plus the attractive pattern in the parachute which makes this an effective picture. One feels that the picture could be improved if the figures were not so scattered about in the picture space. As things are they call a bit too much attention to themselves. The girl and the wing tip of the plane at the left are not properly part of the picture. The wing tip might be justified as a device for filling in space, but the girl definitely does not belong in that position. We should have only one man holding on to the ropes of the parachute or the two now shown should be pulled together so that they overlap and function as a unit so far as the composition is concerned.

Data: 11 x 14" bromide print.



"Silk"

Myron Hexter

Chicago, Ill.

Fifth Award

Advanced Class

■ This print is technically excellent. The curving forms of the tanks form an interesting composition that holds together very well, and textures are beautifully rendered throughout. The ladder which appears at the juncture of the second and third tanks establishes a point of emphasis, and also gives some indication of scale, but it does not perform either of these functions with any great forcefulness. If we look at this picture as a more or less abstract pattern, things will appear quite satisfactory. If we choose to look upon the picture in more factual terms there is some desire for a stronger center of interest, and a more positive indication of scale. The figure of a workman placed near the top of the ladder would be one way of satisfying both deficiencies. Perhaps the choice mentioned above indicates a certain ambiguity in the picture. It is rather too detailed to be looked upon purely as pattern, and needs pointing up as an industrial picture. On the whole we think the picture would be more successful with some such addition as has been indicated.

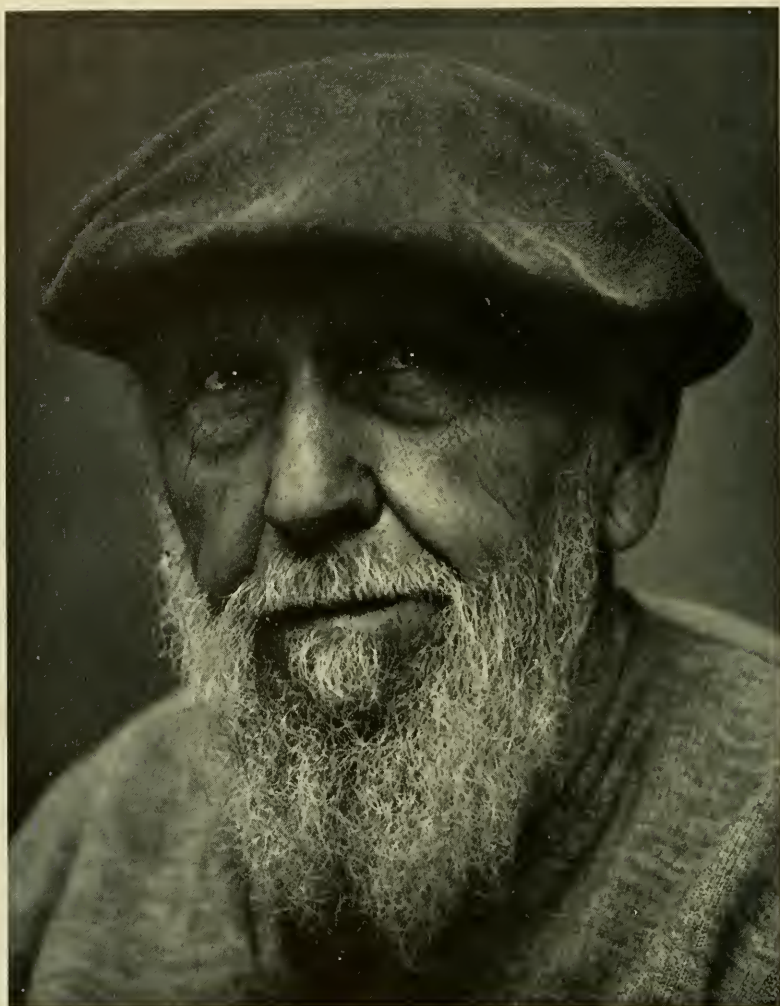
Data: 3 1/4" x 4 1/4" Graflex; E. K. Anastigmat lens; exposed at F:16, on E. K. Panchro Press, in DK-50; 11 x 14" print on E. K. Kodabrom N-2, in D-72.



"Slurry Tanks"

William Hart

Pasadena, Calif.



"Bernard Mayback"

*Fred Herrington
San Francisco, Calif.*

First Award—Amateur Class

■ This is as fine an example of outdoor portraiture as has appeared in these pages for some time and it earns Mr. Herrington a well deserved promotion to the Advanced Class. The treatment is simple, dignified and in keeping with the subject; the lighting creates a beautiful modeling of the face; the expression is excellent; the head is nicely placed in the picture space; the tone value of the background is just right; there is fine separation between subject and background which adds to the feeling of roundness created by the lighting; and the print has a rich, juicy quality that is a delight to the eye. Mr. Herrington has been working patiently and consistently for just such results as this for a long time. We should like to use his example to emphasize what has often been said in these pages. That practice and more practice is the only road to successful photography. Not haphazard practice but practice directed toward a fully realized objective. Most photographers scatter their efforts over every conceivable kind of subject matter. If they could only set up a clearly realized goal (for Mr. Herrington it is outdoor portraiture such as you see here) and concentrate their efforts in that direction, their progress would be greatly accelerated.

Data: $3\frac{1}{4}$ " x $4\frac{1}{4}$ " Graflex; $6\frac{1}{4}$ " Zeiss Tessar; 1/10th sec. at F:6.3, outdoors in shade; E. K. Panatomic cut film in DK-76; 11 x 14" print on Gevaert Gevaluxe, in GD-61.

Second Award

Amateur Class

■ Quite obviously, this picture is built around the lovely sweeping curve which is set up by the play of light on the wake of the boat. The backlighting performs another very useful function in the picture. It throws a lot of unwanted detail in the background into shadow thus achieving a very necessary simplification of material. We do not feel that the masts and spars which cut the top of the print are sufficiently distracting to make their elimination essential. If we trim down to the top of the distant hill as it is seen just above the waterway, we do gain greater concentration on the foreground, because of the removal of the masts, but we also gain something else even more desirable. As things are the eye pays scant attention to the part of the waterway beyond the moving boat, because the sky, etc., pulls it quickly upward. With the suggested trimming the eye moves into the picture more leisurely, attracted by the small highlight on the water in the distance. Consequently the trimming allows the eye to enjoy more of the waterway and to repeat its movement through the picture with greater ease. We do not feel that the suggested trimming throws the moving boat too high in the picture space.

Data: Zeiss Super Ikonta B; 1/50th sec. at F:8, on E. K. Panatomic X; 13 x 16½" print on Defender Velour Black DL22, in 55D.



*C. Stanton Loeber
San Francisco, Calif.*

Third Award

Amateur Class

■ This picture is nicely conceived and the expressions are well caught. The only apparent shortcomings are technical ones. Good definition is lacking with the result that textures are not well shown, and the faces are rather devoid of tone value. The whiteness of the faces is no doubt due to the use of a red filter, which is seldom if ever called for in the rendition of faces. The filter may also be partly responsible for the lack of sharpness; very slightly from its own action, and indirectly by preventing the use of a smaller stop or a faster shutter speed. It is hard to imagine just why the filter was used in this case. Even if the barn were painted red it would hardly have come in too dark without a filter. Filters should never be used unless they are necessary to the desired rendering of the scene. In this case good tone values in the faces would be the first consideration, and a red filter is bound to result in chalky flesh tones.

Data: 6 x 6 cm. Foth-Flex; S.S. Pan., in Champlin 16, with Red filter; 11 x 14" print on B. & W. proof paper, in D-76.



"Audience"

*Addison Buckner
San Marcos, Tex.*

Fourth Award

Amateur Class



*Richard Wagner
San Francisco, Calif.*

Data: $2\frac{1}{4}'' \times 2\frac{1}{4}''$ Rolleicord; $1/12$ th sec., at F:16, on E. K. Panatomic X, with K-2 filter; $11 \times 14''$ print on Defender Velour Black DL, in Defender 55.

■ This picture is made interesting because of the amusing contradiction of the shiny new steeple on the old weather worn church. There is a large group who do not consider that subject matter such as this, shown realistically, is acceptable from the artistic point of view. They would accept it, however, if it were romanticized by being put through one or the other of the various control processes. We have no intention of discussing these matters at this time but use this picture as an excuse to call our readers' attention to a very interesting book by a famous artist. We refer to Thomas Hart Benton's "An Artist In America." Mr. Benton is one artist who has his feet on the ground and is not afraid to say that he thinks that is where they belong. His murals as well as his other work have been both highly praised and condemned, and much of the controversy has centered around the realistic nature of his painting. Consequently photographers who are concerned about the divergent points of view indicated above will find Mr. Benton talking right up their alley.

Fifth Award

Amateur Class



"Helene"

*Stanley T. Clough
Lakewood, Ohio*

■ This is an exceptionally well executed portrait in the surrealistic spirit. Mr. Clough has had a very beautiful head to work with. His lighting creates a lovely delicate modeling and the expression is well chosen. Since there is no upward movement in the picture we cannot see the necessity for so much space above the head. It might be that Mr. Clough intended this expanse of dark to add a touch of mystery, but we hardly think it succeeds in doing that in any very positive way. The simplicity and restraint of this picture point to lesson number one for photographers who wish to work in this vein. The photographer cannot hope to indulge in the towering flights of fancy or achieve the complete divorce from reality, which are open to the surrealistic painter. His camera will always reveal the true nature of the materials he works with. As a consequence the photographer's surrealistic pictures must be arranged and constructed so that such revelation will not destroy the desired illusion.

Data: $8 \times 10''$ glossy bromide print.

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: John W. Riley and Myron Hexter, for the Fort Dearborn Camera Club; R. F. McGraw and William Hart, for the Pack Rats; and Axel Bahnsen, for the Yellow Springs Camera Club.

The following won prizes for their clubs in the Amateur Class: C. Stanton Loeber, for the California Camera Club; Fred Herrington, for the E.P.I.C. Pool; and Addison Buckner, for the Pictorial Camera Club of San Antonio.

The following prize winners have no club affiliations: Richard Wagner and Stanley T. Clough.

Contributing Clubs

Amherst Camera Club (Mass.)
Aremac Club (San Francisco)
California Camera Club (San Francisco)
Camera Clique (St. Louis, Mo.)
Camera Club of Richmond (Va.)
Cincinnati Camera Club (Ohio)
Cleveland Photographic Society (Ohio)
Dallas Pictorialists (Texas)
Detroit Camera Club (Mich.)
E.P.I.C. Pool of San Francisco
Fort Dearborn Camera Club
Fotoklub Ljubljana (Jugoslavia)

Manhattan Camera Club (New York)
Marin Camera Club (Calif.)
Missoula Camera Club (Mont.)
The Pack Rats (Pasadena, Calif.)
Pictorial Camera Club of San Antonio (Tex.)
Portland Camera Club (Maine)
Sierra Camera Club (Sacramento, Calif.)
Toledo Camera Club (Ohio)
Utica Camera Club (N. Y.)
Vancouver Photographic Society (Canada)
Yellow Springs Camera Club (Ohio)

STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	49
Indianapolis Camera Club.....	11
Fotoklub Ljubljana	8
Fotoklub Zagreb	7
Pictorial Photographers of America.....	6
Miniature Camera Club of Oakland.....	5
Los Angeles Camera Club.....	3
Manhattan Camera Club.....	2

Large Clubs Amateur Class

California Camera Club.....	14
Camera Club of Richmond.....	10
Detroit Camera Club.....	9
Miniature Camera Club of Oakland.....	4
Photographic Society of San Francisco.....	4
Cleveland Photographic Society.....	3
Amherst Camera Club.....	2
Indianapolis Camera Club.....	1

Small Clubs Advanced Class

The Pack Rats.....	18
Yellow Springs Camera Club.....	12
The Camera Clique.....	2
Aluminum Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool of San Francisco.....	18
Dallas Pictorialists	12
Signi Phi Nothing.....	5
Pictorial Photographers of San Antonio.....	3
San Jose Camera Club.....	3
Vancouver Photographic Society.....	3
Florida Camera Club.....	2
Fresno Camera Club.....	1
Midwood Camera Club.....	1
Sierra Camera Club.....	1

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired, on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

Correspondence*

About Salons

Dear Sirs:

I have been contacting some of our members, and have had the opportunity of discussing with them some of the innovations introduced by the San Francisco Salon. I believe there are several things which should be drawn to your readers' attention, probably with the hope that we may be able to induce other Salons to "mend their ways."

For some time, there has been quite a discussion over the methods used in marking the jury ratings on the reverse of the print mounts. While it is true that we are interested in having these ratings, yet at the same time to indicate them by the use of rubber stamps and heavy crayon pencils is not appreciated. Not only does it mutilate the mount, but it may have an influence on other juries. San Francisco's use of a lightly gummed sticker, easily removed if desired, is a very splendid method, and they are to be commended upon its adoption.

On the other hand, and for like reasons, I find an unfavorable reaction to the printing of the jury ratings in the catalog, as done by San Francisco. We doubt that the general public is interested in the ratings, and accordingly they may not serve any useful purpose. Nevertheless, this may not have any serious effect on future judgments, as it would be quite difficult for any jury to have the catalog available, or to memorize these ratings. If this were general practice, however, it could have some influence.

While we are on this question, there seems to be some discussion regarding the affixing of the regular exhibit stickers. Many of our people desire to remove them for placing on a master print, and this may be done if they are lightly tipped along the edges. One of our smaller Pennsylvania Salons provides a sticker with a perforated edge, the stub being gummed so that the label may be removed by tearing along the perforation. This seems to be a splendid idea.

Best regards to my old home town. I am sorry I shall be unable to see THE FAIR. I shall have to be satisfied with that "one horse" fair being held in New York this year!

Sincerely yours,

Arnold V. Stubenrauch.

President,
Council of Camera Clubs
Philadelphia, Pa.

Ropes, Posts, and Potatoes

Dear Sirs:

I shan't blame you if you do not publish this note, for you were most kind in print-

ing my overlong letter on "Subject Matter in Photography" in your August issue and also permitted Mr. Roi Partridge generous space in setting forth his own, opposing views in your September number.

I can't say that I was surprised that Prof. Partridge took issue with me. My surprise lies in the fact that he regarded my setting forth of my views as dogmatic, intolerant and dictatorial. I did not mean them to be so, for I feel very humble about all matters having to do with art and photography.

One, like Prof. Partridge, whose command of English is as superior as is his knowledge of art, doubtless realizes that these badly worn coins which we use for words often mean one thing to one person and something wholly different to another. Doubtless this accounts for views which were set forth with all humility seeming to him harsh, dogmatic and deserving of his brilliantly-expressed ire.

I feel that photography's greatest opportunity is to be intelligible to the mass of people and to educate them into a form of artistic appreciation. Prof. Partridge calls this "sophomoric romanticism" and rightly defends his right to enjoy "purely meaningless arrangements of line, form and texture."

There you are. I have not changed his opinion and he, I am afraid, had not altered mine. In closing, may I say that I think it would be an excellent thing if the editor of Camera Craft, always receptive to ideas, would make available to Prof. Partridge several pages in a forthcoming issue* in which he would not need to be replying to benighted views but could explain for the benefit of those of us who are bewildered by these trends in photography the meaning—the photographic philosophy—which lies behind his enjoyment of pictures of rope, posts, potatoes and strands of barbed wire. I am sure there are many, like myself, who would be grateful for such an exposition.

May I also say that I hope he got as great enjoyment out of belaboring me as I suspect he did. A good fight, whether physical or mental, stirs the blood, enlivens the body, causes the heart to beat faster and is generally pleasurable.

Most sincerely yours,

Jack Wright.

Managing Editor,
San Jose News.

*An article by Roi Partridge will appear in the November issue.—Ed.

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

What Is Your Photographic I. Q.?

Your Photographic I. Q. for this month is in the form of a glossary for photographic terms. The definition of a photographic term is first given and is then followed by a choice of three terms. Check the term described by the definition. Then turn to page 500 to determine your score. The perfect score is 100%; deduct 10% for each error. Excellent rates 90%; very good, 80%; good, 70%; fair to bad, below 70%.

1. A numerical expression of the relation between the contrast of the negative and that of the subject photographed.

- ☐ Transparency
- ☐ Gamma
- ☐ Opacity
- ☐ Density

2. The gradual shading off of a picture towards its border so that it is without a definite bounding line.

- ☐ Frilling
- ☐ Ferrotyping
- ☐ Vignetting

3. All gradations in a photograph between the highlights and the deepest shadows.

- ☐ High or low key
- ☐ Resolving power
- ☐ Half tones

4. A motion picture term referring to editing technique and used to indicate highly specialized cutting; also a series of "still" pictures placed closely together or superimposed in an effort to tell a story.

- ☐ Titling
- ☐ Montage
- ☐ Composition

5. The distance from the optical center of a lens to the ground glass or film when focused at infinity.

- ☐ Equivalent focus
- ☐ Spherical aberration
- ☐ Parallax

6. Applied to light which affects sensitized photographic plates, films and paper.

- ☐ Achromatic
- ☐ Actinic
- ☐ Latent Image

7. A colorless or white tubular crystal, or as a white granular powder, odorless, and having a strong saline taste. It is used as a restrainer.

- ☐ Potassium ferricyanide
- ☐ Chrome Alum
- ☐ Potassium Bromide

8. Used with reference to chemical salts from which all water has been removed.

- ☐ Monohydrated
- ☐ Anhydrous
- ☐ Crystalline

9. Irregular spots or circles of all colors of the spectrum appearing in the negative image when projected in an enlarger.

- ☐ Newton rings
- ☐ Reticulation
- ☐ Refraction

10. A process of making an oil-pigmented picture by bleaching the silver from a photographic print and inking it with a brush.

- ☐ Paper negative process
- ☐ Bromoil process
- ☐ Carbon process

Edward Weston photographs will be displayed in the following Western cities during the coming months: **Los Angeles**, Calif., Jake Zeitlin Book Store, 624 So. Carondelet, Sept. 15th to Oct. 15th; **Vancouver**, B.C., Canada, Vancouver Art Gallery, Oct. 24th to Nov. 5th; **Hollywood**, Calif., Morgan Camera Shop, 6262 Sunset Blvd., Nov. 1st to Dec. 1st. The exhibition at the Morgan Camera Shop will be retrospective, including prints from 1902 until the present time.

Ansel Adams will have a large showing, chiefly of his latest work in several fields, at the San Francisco Museum of Art, Van Ness and McAllister Sts., San Francisco from September 19th through October 15th. The museum is open evenings until 10 P. M.

The Baltimore Camera Club are opening their new permanent quarters at 601 W.

North Ave., Baltimore, Md. The new quarters, besides providing a reception room, library and demonstration room, has a fine gallery for the display of photographic prints. A number of important exhibitions have been scheduled for the coming months: the Oval Table Society Invitational Exhibit, which was displayed at the World's Fair in New York, and the Zeiss-Ikon 100 Print Salon. Plans have been made to have worthwhile displays exhibited at all times and visitors are welcome on Friday evenings and Saturday and Sunday afternoons.

Club Notes

FORTHCOMING EXHIBITIONS SEE SEPTEMBER CAMERA CRAFT

Will be published next in the November Issue

Photomicrographers will be interested to learn of the publication of an excellent technical paper, which will provide them with much very valuable information. The paper is entitled "The Application of Fine Grain Processing and Condenser Illumination Enlarging To Photomicrography," by Frank P. McWorter. The author has carefully investigated all important fine grain developers. He makes specific recommendations as to those best suited to photomicrographic work, and points out in detail the greater control and improvement in quality which is made possible through condenser illumination in the enlarger. The paper appeared originally in STAIN TECHNOLOGY, Vol. 14, No. 3, July, 1939, and will be found in, or can be obtained by, most libraries. The author is Plant Pathologist at the experiment station conducted by the U. S. Department of Agriculture, at Oregon State Agricultural College, Corvallis, Ore.

NEW CLUBS. Group 13. 10906 Le Conte Ave., Westwood Village Station, Los Angeles, Calif., address Dan Hickson, Secretary. **Coronado Camera Club**, of Coronado, Calif. Organized July, 1939. Meetings the Thursday following the second Tuesday of each month. Address H. Richard Pierce, Secretary, 865 1 Ave., Coronado, Calif. **35 Club of Denver, Colo.** Organized Dec., 1938. Open to those using 35mm. cameras only. Address C. C. Wood, Secretary, 2220 Tremont Place, Denver, Colo. **The Wasco Camera Group**, of Wasco, Calif. Organized April, 1939. Address Mrs. C. Herbert Lingren, Secretary, Box 458, Wasco, Calif. **Camera Club Council of Greater Cincinnati**, Ohio. Organized May, 1939. Thirteen clubs are members at present and others interested are invited to send representatives to meetings. Address Mr. Herbert Heine, 8207 Vine St., Cincinnati, Ohio.

The Women's Photographic Society of Cleveland, Ohio, is a active group of women photographers with headquarters at 750 Prospect Ave. The club maintains club rooms and a darkroom for members and operates a photographic school with classes for beginners and advanced workers. The new school term will begin Oct. 4th. The group also publishes a very interesting and informative club paper "Highlights and Shadows." All women interested in photography are invited to attend meetings. Further details may be obtained from the Secretary, Madeline Zupansic, 6728 Edna Ave., Cleveland, Ohio.

The Hartford County Camera Club, 284 Asylum St., Hartford, Conn., make a special effort during the summer months to get their members better acquainted by sponsoring outings at which activities of a social nature are stressed although photography is not neglected. At present, they are planning to charter a bus for a club expedition to the New York World's Fair.

The California Camera Club, 45 Polk St., San Francisco, Calif., announces that registration for the Fall Term of their School of Photography has now begun. This year, the School will be divided into two groups, Beginners and Advanced, so that work may

progress more effectively. Classes will be limited to thirty-five students each and all interested are urged to apply immediately. The courses are to last for nine weeks and the extremely moderate fee of \$5.00 may be applied on Club Membership if desired.

The Toledo Museum of Art, Toledo, Ohio, boasts a completely modern photographic department, under the direction of Mr. Leo MacDonough, the Museum's Official Photographer. With this well equipped plant Mr. MacDonough has prepared a complete file of photographs of the Museum's art objects. Photographic prints are available to visitors and slides for lectures are also prepared in this modern plant.

Dr. Edmund Lowe, of the Edwal Laboratories, of Chicago, Ill., addressed a large group of Bay Area photographers at the San Francisco Museum of Art on August 31st. The lecture was sponsored by the Photographic Society of San Francisco and those attending were unanimous in their praise of Dr. Lowe's excellent, informative talk.

The Clifton Camera Club, Clifton Theatre Bldg., Clifton, N. J., cordially invites photographers in their vicinity to attend their meetings, held the second and fourth Tuesdays of each month. The group maintains offices and a portrait studio at the address above.

A color transparency show is planned, for January, 1940, by the Miniature Camera Club, of Philadelphia, Pa. All Kodachrome and Dufaycolor transparencies will be eligible and they will be selected for exhibition by a jury. The continually mounting interest in color should make this activity an important one and it shows the progressive attitude with which this enterprising club seeks to keep abreast of its members' interests.

An exhibition of **Hungarian Photographic Art** is being displayed in the exhibition gallery, of the Photographic Section of the Franklin Institute, Benjamin Franklin Parkway at 20th, Philadelphia, Pa. The exhibition will be on view during the entire month of September and no photographer in the vicinity of Philadelphia should miss the opportunity of seeing these 100 fine prints.

A course in motion picture photography will be given in Oakland, Calif., at the Oakland Evening High School, Park Blvd., at Hopkins St. The course will be directed by Mr. Virgil Muhler, whose wide experience in cinephotography qualifies him as an excellent instructor in this field. The classes begin September 12th and continue every Tuesday evening at 7:15 P. M., for 16 weeks. The course will explain the technique of making amateur movies, with their 8mm. or 16mm. equipment. There will be pictures, open forums for questions, demonstrations of equipment, etc. Registration fee is \$2.00. For further details write the Oakland Evening High School, Park Blvd., at Hopkins St., Oakland, Calif.

A darkroom has been constructed at the City of Berkeley's Echo Lake Camp, in the

High Sierras, above Lake Tahoe. The dark-room is available to all guests at the camp and Manager Carlton E. DeWitt is to be congratulated on his progressive attitude and his understanding of the needs of photographers. Developing and printing equipment and all necessary chemicals are provided free of charge and it is only necessary to pay for the paper used. Though the camp is maintained by the City of Berkeley, we understand that non-residents may also attend and with this inducement added to the natural attractions of this beautiful location many photographers should find this an ideal vacation spot.

The Utica Camera Club, of Utica, N. Y., recently held their annual elections. The group holds meetings and maintains a dark-room at the Munson-Williams-Proctor Institute, 318 Genesee St. Meetings are held the first and third Fridays of each month, at 8:00 P.M. Communications should be addressed to Hobart Price, Secretary, 317 Leah St., Utica, N. Y.

For the past three months San Francisco candid camera owners have had the opportunity of taking pictures during the regular performances of the Ice Follies of 1939. A contest was held, with prizes and public recognition for the winners. As the Ice Follies start on their tour with the new 1940 show, we are reminded that the management in the various cities will do their utmost to cooperate with amateurs who wish to avail themselves of the opportunity of taking some of the many interesting pictures that this show affords.

Beginning its fiftieth year of instruction in photography, the Brooklyn Institute of Arts and Sciences, of Brooklyn, N. Y., is offering an augmented schedule of classes that will appeal alike to the amateur or professional. Complete descriptive pamphlets will be distributed to all photographic supply houses in the New York area or may be obtained by telephoning the Registrar of the Institute, STerling 3-6700.

The Aremae Club, of Wilmington, Del., an active group seriously seeking the betterment of photography, have just begun their third year of camera club work. During the past year, the club has profited from a course in composition directed by Mr. Frank E. Schoonover. The success of this class has prompted the group to schedule two more courses for the coming year: one to continue the study of composition and another on photographic technique.

The All-Milwaukee Salon Exhibit will be exhibited at the Layton Art Gallery, Milwaukee, Wis., from Oct. 24th to Nov. 3rd. This salon is a cooperative venture of the major photographic clubs of that city. Each club is represented by twenty prints. Photographers in Milwaukee with no club affiliation may submit one to four prints by paying the usual salon fee of \$1.00. Prints are selected for hanging by a competent jury.

Plans for the Fifth Annual Convention of the Photographic Society of America are now complete. It will be held at the Capitol Hotel, New York City, on October 7th and 8th. October 6th will be Photographic Society of America Day at the New York

World's Fair and special consideration will be given to photographers. For complete details write B. H. Chatto, Secretary, 1300 Milton Ave., Pittsburgh (18), Pa.

The Brooklyn Camera Club, Brooklyn, N. Y., are planning a lecture and demonstration, with models, by a professional make-up artist. The club has kindly invited interested amateur photographers to attend this demonstration. Write to Daniel Stein, Secretary, 2301 Kings Highway, Brooklyn, N. Y., for an invitation.

The Gary Works Camera Club, Gary, Ind., extend a blanket invitation to all amateur photographers, living in or visiting their city, to attend their meetings. This lively, enthusiastic group present a fine series of informative meetings and photographers will do well to take advantage of this invitation. Write them care of the Carnegie-Illinois Steel Corporation for meeting dates.

The Institute of the Academy of Music, 30 Lafayette Ave., Brooklyn, N. Y., are offering a wide selection of courses in photography. The courses are open to all and a folder describing the classes in detail may be obtained on request from the above address.

Dr. H. D'Arcy Power, associated for many years with Camera Craft, recently passed away. Dr. Power devoted many years of his life to the service of photography and though he has lived abroad for a considerable time he has always maintained his capacity of correspondent with this magazine. Photography may well be thankful for such devoted followers as Dr. Power, who in their long years of endeavor have done much to make the camera the joy and pleasure it is to millions today. We are sure that all photographers join us in honoring his memory.

The Los Angeles Camera Club, of Los Angeles, Calif., have added a new classification in their monthly print competitions. The new classification opens the competition to a large group, who are ordinarily excluded from these beneficial contests, those whom circumstance prevents from developing and enlarging their own pictures. The group is open to all contact prints and all other operations except exposure and trimming may be done commercially. We believe this to be a commendable attempt to expand the benefits of club competitions.

The camera club for printers and those connected with the printing industry has been organized in Oakland, Calif. The new group, to be known as the Graphic Arts Camera Club, will meet each Tuesday night at 7:00 P. M., at the Central Trade School, 28th & Filbert Sts., Oakland, Calif. Any printer interested in photography will be welcome at the meetings.

The Gary Works Camera Club, of Gary, Ind., has installed permanent print exhibition racks in the Central Public Library. All shows will be displayed there under glass and visitors are welcome.

The Chicago Camera Club, 137 N. Wabash Ave., Chicago, Ill., has announced the exhibition schedule for September and October. During September, there will be a double exhibition of prints from Herman A. Scherrer, the Indianapolis broomstick worker and Mrs. Scherrer; and a traveling show from the Heart of America Camera Club, of Kansas City, Mo. October will bring the Annual Members' Show of the Chicago Camera Club. A feature of the Members' Show will be prints of the San Francisco World's Fair.

The Loudonville Camera Club, of Loudonville, Ohio, a town with a population of slightly more than 2000, may well be able to boast of the highest number of camera-addicts per capita of any city or town in this country. This group, established for a little over a year, has a membership of forty regular and 20 associate members.

The Cinema Club of San Francisco recently organized a study group to delve deeply into special cinematographic problems. It was felt that a small group, vitally interested in technical problems, would be able to discuss subjects unsuitable to general club meetings.

San Franciscans are offered excellent photographic instruction under the direction of Mr. B. A. Readé, well known San Francisco portrait photographer. There is no charge for these classes, given at the Balboa Evening High School. Courses will be offered for both beginners and advanced amateurs and enrollment will begin August 28th. Now starting their third term, these classes are gaining rapidly in popularity and a large enrollment is anticipated.

A stenographic report of the Second Annual Short Course in News Photography, given by the Department of Journalism, of the Kent State University, Kent, Ohio, is available to those interested for \$2.58. The report is offered at its cost price in order that the benefits of the course may be available to a wider group.

The Dayton Photographic Society, of Dayton, Ohio, will begin their regular fall meetings on September 13th. The group will meet in the American Room, of the Gibson Hotel, every second and fourth Wednesday during the coming season. This season the club will sponsor the Miami Valley Annual Salon among many other major activities. Correspondence should be addressed to George Eaton, P. O. Box 102, Dayton, Ohio.

A series of programs on the "Theory and Practice of Photography" are being broadcast over Station WKAR every Saturday at 2:45 P.M., E.S.T. The programs, under the direction of Mr. John L. Beech, are sponsored by the People's University Camera Group, with the cooperation of the Michigan State College.

The Westchester Camera Club, of Mt. Vernon, N. Y., recently held their tenth annual meeting. Prizes were awarded to the winners of club contests and an interesting program was presented. Candid camera film-slides of club activities were a feature of the evening and each member received a copy of the club "Year Book," a photographic annual made up of the members' prints.

The Sixth Annual Invitational Club Exhibit of Pictorial Photography, sponsored by the Indianapolis Camera Club, will be displayed at the John Herron Art Institute, Indianapolis, Ind., during October. This exhibition assumes an increasingly important position among photographic shows each year. The Indianapolis Camera Club extends invitations to clubs, throughout the country, to submit a group of 16 prints, no more than two of which can be made by any one member. The Warren H. Munk Trophy is awarded to the contributing club whose set of prints is judged best in the show. Nine of the invited clubs have already accepted invitations and it seems certain that the quality of this year's exhibition will exceed the excellent standard of former years.

The Southern California Council of Camera Clubs held its first annual meeting on July 7th. Attending were representatives of fifteen clubs. The Council intends to offer its member clubs a number of important services, such as: a Speakers Bureau; inter-club salons; it will handle traveling shows from groups outside the council; and sponsor outings. The Council will be pleased to hear from clubs in Southern California who are interested in membership. Address the Southern California Council of Camera Clubs, 2504 West 7th St., Studio 5, Los Angeles, Calif.

The Camera Club of Richmond, Va., is spending hundreds of dollars on improvements in equipment for their studio and gallery, at 14 South 17th St. The group is also increasing their library of photographic books, which are available to members for a rental fee of five cents per week. In the near future, this active group will begin work on a series of sequence pictures of Virginia industries.

The Hermitage Photographic Society, of Nashville, Tenn., was organized, in April of this year, with eighty charter members. The group maintains its headquarters in the Hotel Hermitage and meetings are held bi-monthly. Correspondence from other clubs is invited and should be addressed to: Jack Ansley, 162-4th Ave., No., Nashville, Tenn.

The Tripod Club of the Central Branch Y.M.C.A., 55 Hanson Place, Brooklyn, N. Y., is sponsoring a series of courses by Mr. J. Ghislain Lootens, F.R.P.S. An exhibition of student's work, from the term recently concluded, was presented by the club. The new Fall Classes will begin shortly with courses on the Fundamentals of photography; Advanced Technique of Photography; Retouching; and Portraiture. For complete details write the above address.

Winners for the May period of the Ford Exposition Photographic Contest were recently announced and the First Prize, a Ford V-8, was won by Mr. James Harvey Hebb, of Philadelphia, Pa. Mr. Hebb is better known to radio listeners as "James Harvey" who conducts the Camera Club of the Air over Station KYW. The final period of the Ford Contest will close Sept. 4th. Any photograph showing all or a recognizable part of the Ford Exposition at the New York World's Fair, taken by an amateur photographer, is eligible. Entry blanks may be obtained from photographic supply stores and from Ford dealers.

Notes and Comments

William Mortensen is now conducting Sunday Seminars that are open to all interested photographers. The next class will be held on September 24th and after that on every second Sunday. Classes leave the Mortensen Studio, 903 South Coast Blvd., Laguna Beach, Calif., at 2:30 P. M. The fee is \$5.00 per person for each lesson and classes are limited to twenty. Equipment necessary is a camera, negative material, and a K2 or G filter. Models and costumes are provided. Each student makes a set-up under the personal supervision of William Mortensen and may bring or send two prints, from negatives made on the afternoon's shooting, to Mr. Mortensen for criticism. These Sunday afternoon Seminars offer photographers an ideal opportunity to study under one of America's most famous photographers and instructors.

A new line of telescopes, each instrument having several different powers, is announced by the Wollensak Optical Company, Rochester, N. Y.

Under the trade name of **Vari-Power**, these new telescopes offer the user a whole battery of telescopes in one instrument. Thus the 15x40, for example, supplies powers of 15X, 20X, 25X, 30X, 35X and 40X. The change of power is made by drawing the power (eye) tube in or out. Markings on the tube, in steps of 5X, make the process fast, exact and free from guesswork. Other models are 5x20, 10x30, and 20x50, these figures indicating the minimum and maximum powers of the respective models.

Characteristics of all models are claimed



New Vari-Power Telescope

to be equally clear and sharp image at all indicated powers, due to augmented optical system; knurled focusing ring for easy finger grip; non-loosening, non-wobble joints, dust-proof, and moisture-proof; chrome-plated rust-proof tubes; large tubes surfaced with deep-grained Morocco Vulcanite. Each Vari-Power is supplied in a case of cavalry-saddle tan cowhide.

Included in the line is a Vari-Power Spotting Scope, with powers varying from 15X to 40X, in marked steps of 5X, enabling low powers to be used on dull days or for mirage, higher powers in brilliant sunshine and on 200-yard ranges.

Prices are said to compare very favorably with those of standard-type telescopes.

One hundred years ago, Louis Jacques **Daguerre**, presented his photographic process to the French Academy and thus started photography on its way to becoming the giant industry it is today. In commemoration of this event, the Eastman Kodak Co., has opened the finest display of Daguerreotypes, pioneer equipment and early photography ever presented in the United States, at the Eastman Kodak Building, of the New York World's Fair. Many Museums and private collectors have co-operated with the Eastman Kodak Company to make this display possible. This exhibit adds still another reason for photographers to put the Fair on their must list.

New Cine-Kodak 8mm. Super-X Panchromatic Film has been placed on the market by the Eastman Kodak Co., of Rochester, N.Y. The new film is three times as fast as regular "Pan" film and it is surprisingly fine-grained. In addition to these important qualities the new Super-X 8mm. film yields exceptionally clear, brilliant screen pictures. Price will be \$2.25 per roll.

The new Kodak Precision Enlarger introduced by the Eastman Kodak Co., of Rochester, N. Y., quite literally has the whole country talking. It is an excellent enlarger, precision-built in the highest sense of the word but its use as an enlarger is only one in many to which this instrument can be adapted. With accessories, the enlarger can be used for copying, photomicrography, color separation work, and as an independent camera. It is supplied with two series of fine projection lenses that permit its use for film sizes ranging from 35mm. to 2¼x3¼ inches. It is counterbalanced and is moved up and down with maximum ease. The head itself may be swung to any position from vertical to horizontal. The enlarger's system of heat control eliminates any possibility of damage to negatives and the negative carriers are of the new glassless type. The new Kodak Precision Enlarger offers many more important features; ask your dealer to demonstrate them. Price is \$67.50, without lens.

A new Speedgun, the Deluxe "C" Jr., has been produced for use with the Miniature Speed Graphic by the Speedgun Corporation of America and it will be distributed exclusively by the Folmer Graflex Corp., 154 Clarissa St., Rochester, N. Y. The new Speedgun may be hooked up to both the front and rear shutters of the Graphic at the same time and the photographer has only to select his shutter before making the shot. Complete details may be obtained from your local dealer or from the address above.

The H.C.E. Hollywood Combination Lens Shade and Filter Holder is made for every type of lens and camera, still or movie, by the Hollywood Camera Exchange, 1600 Cahuenga Blvd., Hollywood, Calif. This handy, easy to use, device for two photographic essentials has just been greatly reduced in price. With the H.C.E. Combina-

tion, expensive mounted filters are not required, as the unmounted type are easily and quickly inserted and removed. The Hollywood Camera Exchange also have a complete line of filters and are distributors for Harrison, Scheibe and Wratten filters and diffusion disks. An illustrated folder describing the H.C.E. Combination is available without charge upon request to the above address.

Mr. Theodore Buckwalter of the Pocket Photo Monthly and the Fomo Publishing Co., of Canton, Ohio, recently visited the offices of Camera Craft. With Miss Ida M. Reed, owner and manager of Camera Craft, Mr. Buckwalter discussed publishing problems.

Wabash Superflash Photolamps are now supplied with a safety jacket, an invisible, lens-clear, heavy double-film-wall both inside and outside of the glass bulb. Wabash lamps can now be thrown full force against the wall and, although they will crack and dent, they will not shatter and every bit of glass is held within the safety jacket. This innovation adds the finishing touch to a complete system of Wabash safety measures, for in addition to the safety jacket these lamps have the following assurances of perfect performance. The neck of every Superflash is protected against heat and cracking by an asbestos safety disc which also keeps the flash element in its correct flashing position and guards against "lumping" of the wire. The blue safety spot offers a visible check to the user as this spot automatically turns pink if a defect develops. Further, the new Superflash lamps can be flashed only by direct application of current to each individual bulb, thus eliminating the waste of "contact-flashing." Complete data on the Wabash Superflash Lamps is available in the new Wabash Bulletin No. 715P. Copies will be sent free upon request to the Wabash Photolamp Corp., Brooklyn, N. Y.

The New Lumax Composition Meter consists of two translucent plaques upon which are engraved a patented design that guides the positions of the principal and secondary points of interest that go to make up a picture. The meter is held before the eyes so that it covers the camera's field of view and the composition can then be considered with the aid of the guiding design. The plaques also serve as monotone viewing filters, a blue plaque for orthochromatic film and a green one for panchromatic film. The plaques are bound neatly in a leather case. Price is \$2.50 at your dealer's or from the Lumax Photo Utilities, 4815 Cottage Grove Ave., Chicago, Ill.

Roland Calder has again been appointed by the Oakland Board of Education to give an evening class in amateur photography this Fall. The course is elementary in character and will cover what to take and how; developing, printing and enlarging; with some study of still life and portraiture. Classes begin Monday night, Sept. 11th, at 7:15, and will continue each Monday night thereafter for the fall term. Classes will be held at the Technical Evening High School, 43rd and Broadway, Oakland, Calif.

The Leeds Foot Control Switch or "3rd Hand" is manufactured by the Walton Co., 94 Allyn St., Hartford, Conn. With this de-

vice attached to the enlarger or printer, the photographer's hands are free, while he maintains perfect control over his light. The Leeds Foot Controls are supplied with a number of different switches, of which the most interesting model, for photographic purposes, is No. 500E. With this model, the light is turned on by the pressure of the foot and remains on until a subsequent pressure turns it off. This is a definite advantage in long exposures as the switch does not have to be held down during the entire exposure. Price is \$4.50 and an illustrated circular is available upon request.

A photographic competition is planned at the New York World's Fair as a special feature of "Photographic Week," Sept. 24th to 30th. Any picture taken of the Fair is eligible, regardless of the time it was taken. A competent jury will select 200 of the entries, which will receive World's Fair Certificates of Merit and will be exhibited in the Contemporary American Art Bldg., beginning Oct. 16th. During "Photographic Week," photographers will be given unusual opportunities to take pictures. Everything possible will be done to aid camera fans that is within the power of the Fair authorities.

An indirect photographic light, the Vari-Plane Lamp, has been introduced by the Halldorson Co., 4500 Ravenswood Ave., Chicago, Ill. The lamp looks like a modern indirect lighting reading lamp with a disc-like reflecting plane over it. This reflecting plane may be adjusted to any desired angle and it may be removed to convert the lamp for reading. The absence of glare and harsh shadows makes the Vari-Plane very desirable for portraiture. For further details write the above address.

Willoughbys, 110 West 32nd St., New York City, announce that their "Equipment and Accessories" catalog is now ready for distribution. Its 100 illustrated pages describes the complete line of photographic equipment and supplies regularly stocked by this firm. A copy will be sent free upon request. Ask for Catalog 839.

The new Phaostron Electric Exposure Meter has been introduced by the Phaostron Sales Co., of Alhambra, Calif. The manufacturers claim that the new meter gives accurate, easily read, readings from match-light to brilliant sunlight. It is ruggedly constructed and simple to operate. The Phaostron is highly directional in design so that it measures only the light that reaches the camera lens. Price is \$5.00 and a descriptive folder may be obtained by writing the above address.

Leica Exhibit closing date has been deferred to October 1st in order to give photographers time to submit pictures made from negatives of their summer activities. All photographs made with Leica cameras are eligible and entries should be marked "Exhibit" and sent to E. Leitz, Inc., 730 Fifth Ave., New York City.

A new 272-page illustrated catalog has just been published by George Murphy, Inc., 57 E. 9th St., New York City. It contains the photographic products of all the leading manufacturers in America and abroad. A copy will be sent to any photographer for 25c, which may be deducted from the first order of \$1.00 or more.

The F-R "Special" Adjustable Roll Film Tank has been announced by the Fink-

Roselieve Co., Inc., 109 W. 64th St., New York City. The new tank is ruggedly constructed of Bakelite and Stainless Steel especially treated for photographic purposes. It is adjustable to all popular sizes of roll film from a 36 exposure 35mm. roll to and including size 116. Loading has been considerably simplified and may be done from either the inside or outside. The tank is very economical, using only 8 oz. of developer for 35mm. film and 16 oz. for the largest size. The new tank will sell for the amazingly low price of \$1.85.

A new catalog of Gevaert Films, Plates and Papers has just been published by the Gevaert Company of America, Inc., 423 West 55th St., New York City. The complete line is described and the use and purpose explained.

A complete photographic supply catalog has just been issued by Norman-Willetts Camera Center, 330 W. Washington St., Chicago, Ill. It offers 112 pages of photographic supplies, profusely illustrated. Write the above address for your copy.

Stanley R. Jordan, author of "Modern Portraiture," has announced plans for the production of a 16mm. motion picture to illustrate the application and use of Panchromatic Make-up for still and motion photography. The film when completed will be available, at a nominal rental to Camera Clubs and photographers. Completion date for the film is indefinite and will be announced in Camera Craft Magazine. Clubs or individuals who are interested should apply promptly for a showing date since requests will be honored in the order received. Address Stanley R. Jordan, 1675 Eddy St., San Francisco, Calif.

The Edwards' Fine Grain Developing Laboratory, 30-34 East Adams St., Chicago, Ill., are offering a new method of individually handling films. They invite you to write for prices and a mailing bag, to the above address.

The Sun Ray Mastercraft 2 1/4" x 3 1/4" Enlarger manufactured by the Sun Ray Photo Co., Inc., 309 Lafayette St., New York City offers an unusual number of high grade features at a remarkably low price. The Mastercraft has interchangeable lenses; two 1/2" removable condensers; a geared trolley, accurate focusing unit; and adjustable mask that will take negatives from Robot to 2 1/4" x 3 1/4"; Thru-draft cooling ventilation; and many other features. Price is only \$32.50, without lens. Sun Ray also manufacture many other models of enlargers, ranging in price from \$16.50 to \$75.00. See your dealer or write the above address for further details.

The New Bee Bee Range Finder, just announced by Burleigh Brooks, Inc., 127 W. 42nd St., New York City, should prove popular with photographers who do not have cameras with ground glass focusing screens or built-in range finders. In use the photographer simply sights through the eyepiece at one end and two images appear, one yellow and one white. As the finder disc is turned, the images move toward each other until they are perfectly superimposed. Then, the distance from camera to object is read off the dial. Price is \$4.35 and a leather carrying case may be had for 40c additional.

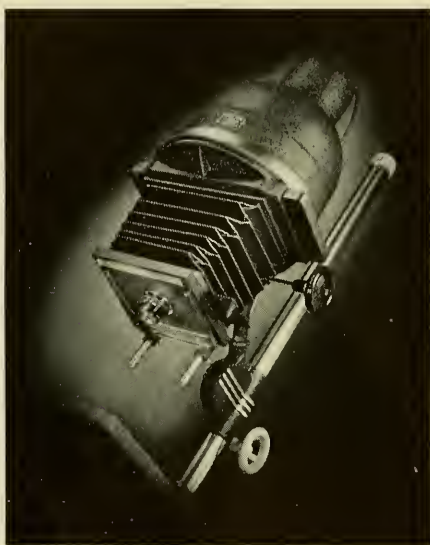
The Simpson Combination Darkroom Ventilator and Film Drier offers the practical solution to two of the amateur photographer's most pressing problems. The Ventilator (which can be purchased separately for \$9.75) brings fresh air into the darkroom at the rate of 125 cubic feet per minute. It is easily attached to the darkroom wall and will eliminate those darkroom headaches and dry parched throats that result from several hours spent in fume-filled, foul air. The Ventilator is also equipped with a filter (this decreases the intake capacity 50%) and a film drying cabinet may also be easily attached. When the drying cabinet is in place, clean air, free from dust, is blown over the films, which hang upon special clips provided for this purpose. Your films will dry rapidly and will be free from dust and dirt. The use of the film drier does not prevent the ventilator from acting effectively in its usual capacity. The Film Drier may be purchased for \$2.75. The Simpson Screen Co., 1841 E. 12th St., Oakland, Calif., are also distributing a Foot Control Switch for the enlarger. This sturdily built device is available for only \$2.50.

The new Hollywood Viewer-Projector has just been introduced by The Craftsmen's Guild, 5773 Olympic Blvd., Los Angeles, Calif. The device acts as both a viewer and projector for 35 mm. film mounted in 2 inch slides. When used as a viewer, it throws a brightly illuminated image, 4 1/4 inches in size on a miniature screen within the mechanism. The turn of a knob, converts the viewer into a projector that gives image sizes on the screen of 20 x 28 inches at seven feet and 36 x 52 inches at thirteen feet. Price of the Hollywood Viewer-Projector is \$39.50.

The new 4x5-inch Laborant Enlarger has just been introduced by the Chess-United Co., Emmett Bldg., New York City. This sturdily built precision instrument offers unusual flexibility. It has a micrometer driven 2 1/2 times bellows extension which permits reducing 4x5" negatives to miniature size. By rotating the lamp house to a horizontal position, wall or screen projection becomes possible. By reversing the enlarger for floor projection, enlargements of photo mural size may be obtained. The enlarger is equipped with a 135mm. Belar F:4.5 lens which is fully color corrected and is recommended for color separation work. With the standard Belar lens, a 6x linear magnification is possible on the baseboard. Other lenses are also available.

Hugo Meyer & Co., 39 West 60th St., New York City, announce a new versatile lens combination that greatly increases the effective use of the Speed Graphic Cameras. Recently Hugo Meyer introduced the highly corrected, needle-sharp, precision 5 1/4" Meyer Primotar f:4.5 lens. Now with the identical shutter which contains the Primotar, the Meyer Extreme Wide Angle Aristostigmat f6.3 lens can be interchangeably inserted which greatly increases the usefulness of this type of camera. The elements can be purchased for little more than half the cost of the lens in shutter thus effecting a real saving in the price of this versatile combination. Complete details may be obtained from the above address.

New Bee Bee Chrome Tilt-Top. This new Bee Bee ball-type tilting and panoraming tripod may be used with almost any camera, but is particularly suitable for use with the new Bee Bee Tripods. Made of steel, brass and aluminum, heavily plated with chromium. Tilting and panoraming are effected by means of two conveniently located thumb screws. The reversible tripod bushing accommodates either domestic or foreign cameras. A 5-inch handle controls the movement with utmost smoothness. The top surface is 1½ inches in diameter, large enough to support almost any size camera. This new accessory weighs only 14 oz., is packed in a neat carton, and sells for only \$2.50. Burleigh Brooks, Inc., 127 West 42nd Street, New York City, is the distributor.



Solar Enlarger

Solar Enlargers. introduced by Burke & James, Inc., 223 W. Madison St., Chicago, Ill., are now available in a variety of models for film sizes from 35mm. to 5 x 7 inches. The Solars are precision built instruments of sturdy construction offering many valuable features. They have an adjustable double condenser system that permits top lighting efficiency. The counter-balanced lamp house is easily raised or lowered with one hand and may be locked securely in any desired position. The focusing device provides micrometer accuracy. Wall brackets may be obtained for the Solar Enlargers and may be bolted securely to the wall of the darkroom. Prices range from \$39.50 to \$59.50. Descriptive circulars containing many hints on proper enlarging technique are available upon request from the above address.

The New Falcx Miniature Enlarger—a precision instrument, incorporating numerous exclusive features, has just been announced by the Advance Electric Company.

Microscopic focusing, a special type safe-light (which accommodates 39mm filters for color separation) and an entirely new de-

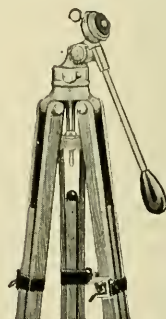
sign in lamp house construction are noteworthy innovations.

Of particular interest is the control principle of the enlarger head itself. Employing the double condenser illuminating system, combined with a brilliantly polished reflector and an opal diffusing glass, the entire lamp house may, when desired, be turned completely to one side of the carriage. This feature, which allows an unobstructed view of the negative carrier and film, also provides greater ease in arranging composition and controlling the degree of enlargement.

For further information and literature, write Dept. R., 1260 W. 2nd St., Los Angeles, California.

A personal Shopping Service has been inaugurated by the Penn Camera Exchange, Inc., 126 West 32nd St., New York, N. Y. The service is designed to aid out-of-town photographers in obtaining the kind and type of equipment they need. When a request is received, a Penn Personal Shopper investigates the sources of supply and a report is made to the prospective buyer. No extra charge is made for this service and ten days free trial is allowed. Write the above address for complete details.

The Enlargometer is a new device for determining the printing time and the proper paper, in enlarging. It has been developed by the Research Engineering Co., 307 S. Michigan Ave., Chicago, Ill., makers of the Printometer. Printing time for any negative is quickly determined, using the Enlargometer on the easel, and the need for test strips is eliminated. Complete instructions accompany the meter as well as a comprehensive list of paper speeds. The Enlargometer is priced at \$4.75.



Thalhammer Thrifty-10 Tripod

Thalhammer New Thrifty-10. Following numerous requests for a popular priced tripod and pan head combination . . . one that might embody some of their exclusive features . . . the Thalhammer Company, 1015 W. 2nd St., Los Angeles, Calif., is now manufacturing their new THRIFTY 10. Dispensing with chrome plating and some of the more deluxe fittings, yet retaining all the rugged and precision-built qualities for which Thalhammer is famous, this unit has been designed to sell for only \$10.00. Its tilt-pan head has a natural metal satin finish, and incorporates the exclusive Thalhammer "Instant-On" Plug. The tripod is made of selected, seasoned wood, finished in clear lacquer, metal parts polished or coated with black enamel.

Our Book Shelves

Practical Stereoscopic Photography, by J. Moir Dalzell. American Photographic Publishing Co., of Boston, Mass. 224 pages. 5½ x 8½", price \$4.00, cloth bound.

The closest acquaintance most of us have had with stereoscopic photography is that old viewing gadget that usually lurked about the house some years ago. You (if you are not already a stereo enthusiast) can probably recall the startling effect of the scenes you viewed through this contraption. Remember how it seemed as if you could walk right in among the trees? However, the author says, that in all likelihood it was this same contraption that turned stereoscopic photography upon its dark days. This maladjusted horror, says Mr. Dalzell, was so poorly fitted to a user's eyes that the usual result of a study of a few pictures was a feeling that your eyes had been removed from their sockets and rolled in the sand. Naturally, such an experience did not make for undying stereo enthusiasts.

These viewing problems as well as those of cumbersome equipment have long since been eliminated and the modern stereoscopicist can work with cameras about the same size and type as those of the one lens variety.

Mr. Dalzell also lays the ghost of the terrors of the technical problems involved in this type of work and his book is written in an easily understood and thoroughly practical manner.

It is the author's opinion that stereoscopic will be the photography of the future and in his last chapter he explains the experimental advance in stereoscopic cinematography upon which, among other developments, this belief is based.

Photopoeims, by Constance Phillips. Published by Covici Friede, of New York City. 8 x 10½ inches, cloth bound, \$1.50.

The author of this volume has created a photographic reality from a series of famous poems. Constance Phillips, the author, has not attempted a literal illustration of these poems but has tried to convey the mood of the poetry photographically. The poetry thus interpreted is the work of such famous poets as Wordsworth, Gray, Campbell, Shakespeare, Shelley, Keats, Longfellow and many others whose genius has stood the test of time. The photographs are excellent and Constance Phillips is to be congratulated on the conception and execution of her book.

Directory of Hobbies and Spare-Time Opportunities, 1938, published by the Park City Book Supply, of Bridgeport, Conn. 5½ x 8 inches, price 25c, paper bound.

A complete guide for the hobbyist, amateur or professional, that offers an explanation of profitable spare-time hobbies and a list of hobby magazines and books.

Camera Lenses & Shutters, Their Uses & Advantages, by Robert M. Faustone. Published by The Fountain Press, of London, England. 64 pages. 5 x 7½ inches, paper, price 75c.

This booklet is No. 9 in the famous New Photographer Series and the scope of the book is best described by its own title. The

author, Mr. Faustone, is experienced both as a photographer and as an author and speaks clearly and authoritatively on his subject. An understanding of the function of the lens is an essential in photography and the photographer who fails to master its principles will obtain a good picture only by chance.

Enlarging For All, by Dr. B. T. J. Glover. Published by the Fountain Press, of London, England. 44 pages. 5 x 7¼ inches, illustrated, paper, price 75c.

The third edition of one of the most popular books in the New Photographer Series of handbooks. The contents have been revised to include the latest photographic developments and now with the author's two famous titles, of the same series, "Perfect Negatives" and "Print Perfection," a complete up-to-date system of developing, printing and enlarging is offered.

Photopedia, The Master Equipment and Materials Guide of the Photographic Industry. Published by the United Catalog Publishers, Inc., of New York City. 350 pages. 7½ x 11 inches, many illustrations, cloth bound. Price \$1.95.

Here is a catalog to end catalogs. A 350-page, illustrated book giving full specifications and prices on all kinds of photographic supplies. The book also includes an index of all manufacturers with their addresses as well as a listing of trade names and registered names with the addresses of the owners.

While this book is primarily intended for the photographic distributor and dealer, it also holds much of value for camera clubs, schools, colleges, etc.

Phototips On Cats and Dogs, by Edwin Smith. Published by the Focal Press of London, England. American Agents, the American Photographic Publishing Co., of Boston, Mass. 96 pages. 7 x 9 inches, illustrated, cloth bound. \$2.00.

This book covers a popular subject that formerly was neglected in photographic writings. It offers practical, detailed information on how to make good pictures of cats and dogs. The equipment necessary, the special technique required and the various kinds of pet pictures are carefully considered and many valuable hints are offered that are the fruits of long experience in this kind of photography. The book is profusely illustrated with pictures by the author and other well known photographers.

Modern Photography, 1939-40, Edited by C. G. Hobue. Published by Studio Publications, Inc., of New York and London. 136 pages. 7 x 10 inches. Paper binding \$2.50, cloth binding \$3.50.

This is the tenth annual issue of this annual which should be well known to all photographers. The, more than 100, pictures reproduced were selected from the best work of photographers throughout the world.

In addition to this fine review of the past year's photographs, several special sections have also been introduced. Mr. E. A. Robins, president of the Royal Photographic Society, has written an article on "One Hundred Years of Photography" and several examples of the work of early masters have been in-

cluded. Eight reproductions in full color; a section on the new Photo-Journalism; and a section on scientific photography are other interesting parts of this annual.

The reproduction quality of this annual is always exceptional and photographers will find help and inspiration in its pages.

Ideas For Press Pictures, by Victor Chamberlain. Published by the Fountain Press, of London, England. 76 pages, 5x7 inches, illustrated, cloth bound. Price \$1.50.

This is not a book on how to take press pictures but rather an idea book of the kind of pictures editors want. It lists the ideas alphabetically from "A day in the life of . . ." to "zoos" offering hints and suggestions on the type of pictures that will have the greatest selling possibilities.

Four new Kodak Data Books have been published by the Eastman Kodak Co., of Rochester, N. Y. Uniform in size, 6 x 8 1/2 inches, they are paper bound.

Kodak Films, 56 pages, 15 cents. Discusses Kodak Roll Films, Film Packs, Miniature, and Sheet Films. Photographic characteristics of the films, such as speed, contrast, and the like, are described, and the sensitometric terms are explained. Methods of determining film speeds and meter settings are also discussed. Of especial value is the "Specifications" section, which provides full information as to the photographic and physical characteristics, the uses and processing of each film.

Kodachrome, Photography in Color, 52 pages, 25 cents. A comprehensive discussion of Kodachrome Film, and data on its use for full-color filming. Exposure technique both in daylight and artificial light is treated, and advice on using a photoelectric exposure meter is included. This carefully-planned book offers diagrams and recommendations for night pictures at home in color, as well as daylight shots; covers both movie and "still" filming; and provides full specifications and data tables for Kodachrome, Regular and Type A, and Kodachrome Professional Film, Daylight Type and Type B. A number of illustrations are in color.

Wratten Filters, 40 pages, 15 cents. This book deals with filters from both the practical and theoretical standpoints, and will appeal equally to the commercial photographer and the serious amateur. Diagrams and illustrations in black-and-white and color supplement the text and demonstrate the use of various filters and the Kodak Pola-Screen. Reference tables aid selection of the proper filters for a given need. Specifications treat each filter individually, giving all data concerning its use, and cover the K-1, K-2, X-1, G, A, F, B, C5, Tricolor Sets, CK-3, and Kodak Pola-Screen, Type 1A.

Eastman Photographic Papers, 48 pages 15 cents. Offers full information on the various brands of Eastman photographic papers and deals at length with their photographic and physical characteristics. A section on "Printing For Quality" is of particular value, and gives helpful suggestions from the choice of paper to the finished print. A number of formulas are included in the section on toning. Specifications contain practical data on the most commonly used papers and include exposure scale values and characteristic curves.

Answers to "What Is Your Photographic I. Q.?"

1. Gamma. Gama is accurately expressed in mathematical terms, but the definition given points to the only aspect of gamma which is important to the practical photographer. If the numerical value of gamma is greater than 1, the contrast of the negative is greater than that of the subject. If it is less than 1 the reverse is true, and if gamma equals 1 the contrast of negative and subject are the same. From this it will be plain that if the subject has very low contrast the contrast of the negative will also be relatively low even though the value of gamma is high. Transparency refers to the light transmitting properties of a given area of a negative. It is the ratio of the amount of light which gets through to the total amount of light falling on the area. Opacity refers to the light-stopping properties of a given area and is the reverse of transparency. Density also refers to the light-stopping properties of a negative, so far as the practical photographer is concerned. In sensitometry it means a number which is obtained by taking the logarithm of the opacity.

2. Vignetting. Ferrotyping is employed to obtain a high gloss on prints by drying them with the emulsion side in contact with a hard polished surface. Frilling is the detachment of the emulsion from its support around the edges of a film or print.

3. Half tones. The "key" of a print refers to the tonal scale in which it predominates; namely, light or dark. Resolving power refers to the ability of a lens or film emulsion to differentiate fine detail.

4. Montage. Titling usually refers to the "naming" of a scene in a movie; composition to the arrangement of a picture.

5. Equivalent focus. Spherical aberration is a lens defect. Parallax is the term used to denote the different fields as seen by the finder and the lens when viewing nearby objects.

6. Actinic. Achromatic means free from color; applied to lenses so corrected that they will give images practically free from extraneous colors. Latent image refers to the image recorded on a sensitized surface by light action but which is invisible until processed by development.

7. Potassium bromide. Potassium ferricyanide is ordinarily a red crystalline solid and is used as a reducer for negatives. Chrome alum comes in large greenish-blue crystals and is used in fixing baths as a hardening agent.

8. Anhydrous. Monohydrated is a state of chemical between dry and crystalline. A crystalline chemical contains the most moisture of the three.

9. Newton rings. Reticulation is the minute cracking of the film emulsion. Refraction deals with light passing through a transparent medium.

10. Bromoil process. The paper negative process uses no oil pigmenting whatsoever, only employing sensitized paper for negative and positive with some hand control work. The carbon process depends on the effect of light on bichromated gelatin.

PERIODICAL DEPT.

CAMERA CRAFT



Nuts?

Helen Thompson Farrell, A.R.P.S.

P. P. A., 6th International Salon

September 1939

WHAT IS GOOD PHOTOGRAPHY?

GEORGE HURRELL

LUXE PRINTER

PRICE 25c

Roi Partridge

Robert L. Pickering

Theo B. Younger



MYRDITH

THE IMPORTANT THINGS IN THESE DAYS ARE NOT THE NOISY
ONES, THE CLANGORS OF BATTLE AND THE SNORTINGS OF WAR
MONGERS, BUT THE QUIET, FAMILIAR THINGS THAT YOU AND I
THINK IN OUR HEARTS AND MAKE WITH OUR HANDS.

MORTENSEN SCHOOL OF PHOTOGRAPHY

LAGUNA BEACH

CALIFORNIA



"Don Oliver"

W. E. Dasonville

What Is Good Photography?

Roi Partridge *

PHOTOGRAPHY is a controversial realm around which gathers an army of more or less belligerent adherents—or rather it should be said, several armies, each ready at all times to defend the Only True Principles as it severally conceives them.

There are those who think the best expression of the craft is to be found in the work of the news photographers. They speak of the courage and resourcefulness of the press men, evidently with the illogically transferred conception that the resulting photographs must be good because the men were brave. There are those who are content only with action shots. Others, blind to the loss of quality, see victory only in the act of blowing up miniature film to impressive proportions. There is a great and growing army for whom success is to be found only in color. There is an army of manipulators; a super-poetical, easily-wounded, engineer corps, armed with an imposing array of chemicals, gums, fancy papers, diffusion devices, and determined at all costs to make photography into something other than what it is—into a kind of tonal molasses, a poetry according to their concepts.

To write upon such a subject is a responsibility, wounding, as it must, the feelings of those whose earnest beliefs differ from mine, although it will be quite aside from my intention to tread upon anyone's toes.

*Roi Partridge's etchings have found a place in 30 or more leading museums and public collections in this country and abroad. He has had 20 years of experience as Professor of Art at Mills College, Oakland, Calif. Three examples of his work as an amateur photographer have appeared as awards in the competition department of of this magazine.

It is a responsibility because if a discussion of photographic principles and practice should seem to imply a criticism of the sincere efforts of others, we owe it to them to explain ourselves clearly and to show that the opinions discussed rest upon thoughtful grounds. This is not easy, as one's conclusions and one's words are two quite different matters. One's conclusions may be built upon logical reasons; upon a sound understanding of a subject—or such at least each of us believes to be the case—but all the words that one may command may be inadequate for the task of so presenting reasons and conclusions that they may carry conviction.

It is a responsibility because it is a common experience to find that those who write upon creative subjects are apt to say more than they can do. It is much easier to say things than it is to do them. Thus a writer often puts himself in a position where he may be justly criticised.

It is a responsibility because any assured expression of personal conviction, no matter how sound the line of reasoning may have been by which it was achieved, is liable to be looked upon, by those who do not agree with it, as an example of unwarranted presumption. This is particularly true if one ventures to make positive statements concerning what is good and what is poor in photography. One wonders if there is any group of individuals in any occupation who are more emphatic in believing what they believe *while they are believing it* than are photographers.

Thus I undertake to write upon the subject with the full realization that I am needlessly thrusting out my head where it may be subject to the blows of those who disagree with me. If I say that *monochrome* photography has nothing to do with color and should have nothing to do with color; that color is a superfluous element, the intrusion of which can only be sweetly amateurish and disturbing, and that therefore brown-toned and blue-toned prints betray a misconception of the spirit and nature of the medium—then John Doe, who has just made a “salon” print in brown, is exasperated to the point of wanting to throw a chair at me.

Criticism is a bitter tonic that needs to be compounded by someone, though he may not be thanked for it and few may take it. It is the hope of offering such a tonic, the hope that my words may offer some light, some stimulus, that must serve as my excuse for breaking into print.

One of the peculiarities commonly found in photographers is the lack of balance between technical knowledge and an understanding of those elements which we term esthetic or creative; the elements which have to do with design, composition, and the details of form and appearance. The weight of thought and experiment is given more to the material than to the esthetic side. Most discussions among photographers are devoted to technical matters. Most articles in the photographic journals are, I believe, devoted to technical subjects. No one can wish to depreciate this keen technical understanding, but it seems fair enough to state that often, or even usually, those who possess it do not know what to do with it. They know intimately the nature of a wide range of plates and papers, and all the subtleties of developing and printing. They have solved the secret of fine grain. They know the inner mysteries of photographic chemistry. In a word, they know all the tricks—but only too often they are not able to apply their knowledge to the production of photography as an art. They can tell one all about



"The City"

John Muller

Pictorial Photographers of America

6th International Salon

timing, about optics, about characteristic curves, but they cannot successfully herd a playful gamma into a photograph that has distinction. They fill the photographic exhibitions—which they affectedly call “salons”—with a vast number of prints, a full nine-tenths of which cannot possibly be called good photography by any sensible criterions; prints which, strangely enough, are frequently not even good technically, and which can have been admitted for exhibition only under the naive belief that they are “art.” If so, it is art “pure and simpleton.”

It seems a fair assumption, judging by results, that another peculiarity of photographers is what appears to be an inferiority complex, indicated by the attempts, seen on the walls of every “salon,” to dress up photography until it seems like other forms of art. To what can this be attributed if not to the desire to be “artists”? Motivated by this impulse, but feeling that a lack of ability or time or means, or a combination of all three, makes this impossible, many individuals take up a medium that seems to them easier. With this they continue trying to express their first and hidden desire, making photographs as much like paintings or drawings or etchings as they can. The results cannot be other than unfortunate, being by no possible chance either good photography or good painting. These individuals need to have it said to them, “If you want to be painters or draftsmen or etchers, there is but one thing to do, and that is to try and be such. But if you work in photography, then for heaven’s sake *be* photographers!”

It is impossible that the many changes which have been taking place in human existence throughout recent years should not be reflected in all forms of art, including those aspects of photography that may be considered as art, for art, contrary to the common conception in which it is held, is not a fixed but a fluid thing, ever on the move, ever changing as it pursues its self-assumed task of reflecting the spirit of its time. As a result it becomes necessary from time to time for the photographer to alter conceptions which he may have considered fixed, such as his ideas of beauty and even of truth, for though we may be reluctant to admit it, both beauty and truth do change. Moreover new truths always appear before we are ready to discard the old, and out of this fact conflict inevitably arises.

At one time art was thought—at least plastic art was thought—to be typified by the sculpture of the so-called “Golden Age” in Greece; by the work of Phidias and his school. Now we turn with more interest to earlier archaic examples. Once we liked the Laocoon, showing a father and two sons in the grip of a huge serpent. For many years, many generations, this was considered a true and great expression both of art and of human agony. Now we consider it a false and tasteless example of bathos, and poor as sculpture besides. Once we liked the art of Victorian England; now we look upon it as a kind of sweetly sentimental and uninspired naturalism. Millais and Landseer, once considered great painters, are now regarded as illustrators. Sir Frederick Leighton, who like both Landseer and Millais, was knighted by the King for his work as an artist, is now thought of as a painter of superior candy-box covers. The Pre-Raphaelites, sensing that the art of their time was not healthy, turned their backs on their own period and tried to work in the manner of earlier centuries, where they thought they would find the truth—but such a course is fatal to any artist at any time, then or now.



"Design for Shower Curtain"

John Gass

*Pictorial Photographers of America
6th International Salon*

On the other hand, El Greco, who was looked upon with indifference for many years, is now considered to be among the greatest. The Englishman, William Blale, once neglected, is now revered. Byzantine art, upon which the world turned its back in the 13th century, is now esteemed very highly indeed. And as was stated before, in the light of what we now look upon with favor, early Greek sculpture is in many ways more satisfying, more true in its art, than carving of a later period which has heretofore held the world's approval.

All of which is cited simply to show that it is not at all uncommon for the ideals and aims, even the truths, of one period to become changed in keeping with the increasing knowledge, and the consequent changing beliefs, of succeeding periods. There is nothing new in this conception, but we need to be reminded of it as a justification for criticising old viewpoints in photography.

As the editors of a recent book on the subject have said, "*Photography could not remain in its old sentimental rut . . . Our eyes are still dim from so much of the old that it seems difficult to see the new. We must rinse out our old eyes so that we are better able to behold what is fresh and clear. Soon we will be able to focus sharply on the new lights and penetrate into the new shadows.*"*

I doubt if the writers of that paragraph wrote into it the same meaning I read into it. Nevertheless as it stands it is a fine expression of a thought that aptly fits the theme that one's conception of what is good in photography must be kept fluid, must change in keeping with changes in contemporary thought. If we are to move forward with the development of a new art, we are not only compelled to refocus now, but will need to refocus again and again, upon new objectives. Even more than that, we need to determine what the new objectives are. No one can state these exactly, but at least it is certain that the sentimental and pretty pictures of yesterday will be replaced by something more in keeping with the time-spirit of today. The misty diffused prints, that appeared almost as if seen through a thin sheet of tissue-paper, must give way to our present day demand for clarity, for a more penetrating vision, for more highly corrected lenses and a more skillful use of them. This is not to say that a photograph which, to the best of our present knowledge, is true to its own nature, to its own inner laws and capacities, has no further use for romance. That, I think, is still with us, hidden in a different subject and caught with a different lens and a smaller aperture. But it is my intention to say that the old unwillingness to disassociate photography from romantic nature, the unwillingness to recognize its superb capacity for design and patterns, should be laid away with the lavender and old lace.

I do not propose to offer answers to every question which these reflections may raise, or to point the way out of every difficulty. But, approaching a confused subject with caution, there appear definite facts which can be stated. One is that creative photography (as opposed to record photography) is a form of art. From this it follows that it must be judged by the standards of art. What, then, are the standards of art? It is certain, if anything is certain, that these are too numerous, too contradictory, too many-sided and elusive, to be well defined by anyone. Positive statements about

*Miniature Camera Work, Morgan and Lester, New York, 1938.



"Quiete Invernale"

Ricardo Moncalvo

*Pictorial Photographers of America
6th International Salon*



"Irresistible"

C. M. Alexander

Pictorial Photographers of America

6th International Salon

art are difficult to make and are in danger of being disproved as fast as they are made. But out of this apparent confusion a few basic truths concerning art seem to emerge, and I will take the risk of listing four of these which I believe must be observed before good photography—that is, photography considered as an art form—can be accomplished.

One: Art will not result from a mere record of objective nature.

Two: Art is an expression of order, of ordered relationships.

Three: Art must always express its period.

Four: Art must be true to itself.

Let us elaborate upon these four statements with particular reference to photography. *One*, that neither art nor creative photography will result from a mere record of nature, is, I think, self-evident. There has to be something more than a record. *What more* is a matter that cannot be stated definitely by anyone, but perhaps some light may be thrown upon it.

(Continued on page 540)



"Construction, Boulder Dam"

A. A. Leonard

*Pictorial Photographers of America
6th International Salon*

Don't Let That Shadow Get Away!

An Interview With George Hurrell

Robert L. Pickering

THE very mountains and sultry air of Burbank, California, are dramatic. But the city is dramatic, too, because of its two leading industries—motion pictures and aviation. And if aviation is dramatic, that just is partly traceable to the many movies made about the heroes of air battles and the handsome transport pilots. Yes, we Americans see drama in many occupations that might seem drab if motion pictures hadn't trained and conditioned us to look for the spectacular and the romantic. But even the great motion picture industry—including Burbank's Warner Brothers First National studios—needs to dramatize itself and its great dramatic stars; through publicity to maintain interest and stimulate the flow of profit that is needed to run even a temperamental, dreamy industry. When you speak of publicity at the Warner studio, you think of the mainspring of the Warner publicity program, George Hurrell—the man who dramatizes drama. Hurrell's job is mainly to beautify beauties and to glamorize glamor.

Stepping into the lobby of the Warner Brothers publicity building, you can feel the influence of Hurrell. On the receptionist's desk is a 6-inch pile of Olivia de Havilland publicity stills. We're used to seeing Olivia look healthy and honest and demure, and in the Hurrell picture she is all that and something more; something appealing and almost seductive, for in the shadow on the right side of her face there's an invitation, one you wouldn't see if a reflector or a diffused light had worked the shadow out. But Hurrell had carefully put the shadow—and the appealing invitation—on Olivia's face, and when he saw what it did to her, he left it there.

Not only on the receptionist's desk is Hurrell's influence seen. As you walk down the hall you see new and different photographic treatments of Humphrey Bogart, Bette Davis, Ann Sheridan, and a half dozen others; the prints are blown up to 18-inch squares, mounted on thick board, and on each wall a dozen or so are grouped together in a lateral row to form long panels of striking character study. To an observant photographer the long panels would perhaps be more interesting as a study in the effects of shadow.

The same theme of shadow is carried on into Hurrell's studio in the



"Zorina"

George Hurrell

Figure 1

Warner camera department. The studio is a high-ceilinged room 50 feet square, with all the inside light coming from the small well furnished cubicle at the far corner from the door, where Hurrell sits at a desk when not busy on some photographic assignment. Against the high walls of dark studio there are neat stacks of unusual background textures, prop furniture and fabrics, and a very few stands of lighting equipment. Again, in the simplicity of Hurrell's lighting equipment we see his interest in the source of light, his preoccupation with shadow.

When you comment on his comparatively small selection of equipment, the young, black-haired photographer doesn't smile. He says, "Beyond a certain point, there's no reason for having complicated equipment. All you need is enough light to take the picture, and lights that can be easily manipulated. Outdoors, of course, you can't shove the sun around. Indoors, you can move the lights. Especially—" here he walked over to a curious apparatus that looked like a network of pipes with a "baby spot" hung on the topmost pipe. "Especially with this boom-light. You can do almost anything with it." He demonstrated. A series of sliding bolts made the light extremely maneuverable, the main object being to obtain close overhead or side lighting without the light's stand getting in the way of the camera. A socket-type hinge and a convenient handle on the spot itself allowed for complete variability of direction. The light is something Hurrell himself had worked up in Chicago, and which was later turned over for commercial manufacture to a Hollywood firm.

"When your lights are maneuverable, that's all you could ask," Hurrell went on. "At least, that's all I ask. I could get along on even less equipment, as many fine professionals and amateurs do. Getting the lights in the most effective places is the main point I observe in lighting. I feel that too much emphasis is put on the type of light used. If you work around and try different kinds of lights you'll find out which you prefer by looking at the results you get. The reason I use a 1000 light instead of the 500 is because I can get a sharp print with a smaller diaphragm opening. In reproduction sharpness is very important."

"But that's all technical stuff, and I don't think I pay much attention to it until somebody asks me questions and gets me to wondering how I did arrive at my conclusions. Many photographers talk about lights so much that they neglect to mention shadow. And shadow is as important to the picture as anything else. But it seems to me that when I have a good picture set up and ready to take, I don't know it by analysis, but just by feeling. Of course, that may be because I've been setting up pictures for so many years that experience has made my photographic thinking processes almost as as fast as instinctive reactions would be."

To avoid the uncertainty of general statements, Hurrell decided that probably the best way to demonstrate his method of the use of light and shadow was to take specific pictures and reconstruct what he had done to obtain certain effects. He reached across his desk and picked a selection of prints of Zorina, Warner's *prima ballerina*.

"Just so you can figure how much time I spend dreaming up a mood to take a picture, I'll tell you this: I spent 20 minutes taking 24 pictures of this girl." Every picture approached perfection. Two or three seemed to achieve it. "It's the way you have to do things here; you have to be speedy.



"Zorina"

George Hurrell

Figure 2

Zorina had just finished a scene in this picture, 'On Your Toes,' and she was scheduled to start on the next one in 20 minutes. So we had carried three lights onto the set, and we made use of a blank white curtain for a background and a stool for the pictures in which she's sitting down. We had to work fast. There was no time to dream and brood. I work on inspiration. Taking pictures is a matter of feeling and mechanics. When the subject and the setting seem ready, then I look at the whole thing; if it looks good, I leave it that way, and if it doesn't I have to change a pose or a light. That's it—you just have to watch the face and body, and jerk the light around to

avoid having shadows too hard or in the wrong places. The two important reasons for adjusting lights are to vary the intensity by adjusting the distance of the light from the subject, and to vary the direction of light or shadow by adjusting the angle of the light beam. Many people keep lights too far away from the subject, and kill the chance of getting interesting shadows. My method of getting these shadows, and keeping them from going too black, is to use, besides one to three subordinate lights, one key light close to the face and high—higher than most light sources.”

Discussing Fig. 1, Hurrell pointed out that all the complicated modelling and the shadow—built background depended on those three lights he and his assistant had brought to the “On Your Toes” set. “The strongest light comes from the key light three feet above and two feet in front of the subject. I usually use something like this. But, listen—” (Here the noted photographer took time out for a careful reminder that no matter what any famous photographer said was his formula, it was never a good idea for anyone else to try the same formula, move for move.) “For one thing,” Hurrell elaborated, “the distance of the light from the girl’s head in this particular picture may have been three feet and two inches above her head and one foot and ten inches in front. It was where it looked best to me. And two inches makes a world of difference in photography. So let’s say here that I’m just discussing approximate distances and angles as an illustration of how I go about getting effects. It’s better to listen to experienced men, then go on and experiment. Besides the key light in this picture, I used another one slightly behind her, and at the same height as the key light. This light, in combination with the key light, does most of the modelling—gives most of the real-flesh appearance to the subject. In the arm, for instance, the idea is to get the light to roll off the flesh without any hard line. Finally, there is a diffused light on the background; it affects only the background design—which of course helps the composition of the picture and helps center attention on the subject’s face and figure, which is what people who look at publicity stills are supposed to be interested in.”

Discussing the same picture in general terms, the photographer went on: “Shadows are more important to the modelling than any other factors are. The subject’s high cheekbones and the strength and definite shape of her face make facial modelling important. She has the kind of face I like to photograph. It makes me want to take advantage of the character in the concavities of the cheeks, the strong lips and the chin cleft. A lean face is always more dramatic in this type of lighting than a fat face would be. Amateurs have told me they envy me because I can get as subjects the most beautiful girls in the world. Well, there are plenty of them working in choruses in Hollywood, but some stars are often the girls who might not be as beautiful as the chorus girls, but have unusual features that lend themselves to photographic characterization and they must be glorified.”

What makes Hurrell pictures so different from what we’ve been used to seeing in publicity stills? “You see, when I started taking pictures of moving-picture people, I found that others had shot them with single spots or floods, so I used mostly cross-lighting, to make my pictures different—except in portraits, where it is a question of getting the most out of a face. The principle of my lighting effects is a matter of making each light do a particular thing. I don’t have lights just flooding on. In these Zorina pictures



"John Garfield"

George Hurrell

Figure 3

each one was a quick inspiration obtained by changing the lights to avoid repetition."

Looking at the artistic effect in each of the pictures to which he was referring (Figures 1 and 2), it is easy to see that each light is doing a particular job; anyone of the three lights could be turned off and still leave an almost excellent picture. In Fig. 2 it's noticeable, too, that one light was doing a job by being turned off; for here the background light has been eliminated, creating a black background out of a white curtain.

Picking up the first print (Fig. 1), Hurrell looked at it closely and stood it against the back of a chair, pointing out its features with a quick finger, explaining what job each light does in the picture. "The key light is on the floor, flush against the wall, and to the subject's left. It's a strong light as a matter of balance; I just wanted the light hot on that side. The reason the light is on the floor is that I wanted to dramatize the legs, which can be done advantageously with Zorina. The key light, besides lighting up the very important area of the right side of the picture, also separates the legs by means of lighting the background and creating a shadow on the legs."

"The second most important light in the picture would be the spot above the subject and close to the wall. It is hitting the top of her headgear, her forehead, arm, breast, thighs and knee. Lower down, its effect is not bright, but on her forehead, arm and breast it is valuable for its brilliance. This light models the face nicely, too."

"Then, the front light is about a foot above the floor, quite close to the camera and a little to one side of the subject. By moving it sideways a little you save the shadows from going absolutely black. The light is placed low, only a foot or so from the floor, to create the interesting background shadow; if it were brighter, the light would do the same things to the girl, but would bring the background shadow down to a halo effect on her head. The same light, in this particular picture, brings out the flesh texture and lets you know what goes on around the neck, arms, and abdomen by saving these areas from being completely a shadow."

Hurrell packed tobacco into a wide-bowled, dull pipe. "I can tell you *how* I do these things," he studied, "but I can't tell you *why* I do them. The main point, I guess, is that I like to do certain things with pictures. Most of all I like to do lots of facial modelling so as to bring out the constructional elements in the face. To let people see what goes on behind the face by making the features of the sitter speak up. To do that, you don't just light up those features. You also leave the shadow where it naturally falls when the subject is in character. Of course, there was another thing that started me working with shadows and paying a lot of attention to them. I have to think of how the pictures will reproduce best in all media—news-papers, magazines, posters, and on almost any kind of paper. Even though I work mainly with shadows, I have to be careful not to have too much shadow area in the pictures. When you have a light print, though, and mediocre reproduction, only a black shadow will hold. Still, I don't want my shadows completely black, because I want to be able to make out what goes on in the dark areas, so I light them up just a little bit. A reproduced picture is lighter than the original print, too. So for various reasons I put out constant effort to hold onto the shadows."

What is there about movie publicity photography that is different from



"Rosemary Lane"

George Hurrell

Figure 4

any other line of photography? "In this business, you have to concentrate on the face. You have to glorify the personality by showing what's *in* the face. In other words, it all boils down to anatomy, what I'm doing in my pictures. The job is to intensify the modelling, rather than subdue it. Maybe I manage this pretty well because I've done some drawing and I know where the bones and muscles of the face are and what they do. I think all photographers should put in a few years of studying and drawing anatomy. As a matter of fact, I've studied with Eric Le Brun at the Chouinard Art Institute in Los Angeles and I think all other photographers should do that, too. After that, they'd start modelling faces unconsciously."

"Naturally, you can achieve more modelling with a man's face than with a woman's. There are some handsome men who would rather be made to look less pretty and more rugged. It's the men with strong faces and good characterization potentialities who appeal to me as photographic subjects."

For an example of the type of picture he preferred to do when at work, Hurrell fished in a closet and came up with an outdoor photograph of John Garfield (Fig. 3). "This was taken along with a dozen others in about 15 minutes. It was about 4 o'clock in the afternoon, and I used one reflector, which would be off to the right of the picture. Garfield was in a picture called "They Made Me a Criminal," and so we tried to get that hunted, worried expression over in the pictures. In this photograph, the problem was to get the face at an angle so that the sun is hitting it with enough light, and still keep enough shadows to give the face guts. The aim was to hold the shadow for drama, to emphasize the worry-wrinkles, instead of turning the face full into the sun. If the sun were hot on the face in this picture, the effect would be much reduced, because there would be no hunted-criminal wrinkles around the mouth, eyes, and forehead. But there are a lot of people who would have brought a reflector around in front to light up the subject, and melt out the shadows. I hang onto them. In this picture, though, you'll notice I didn't ignore the effects of strong light, either; sunlight hitting hard on the hands gives drama and design."

"This Garfield picture," he went on, "is the kind of work I like to do most when I'm here. On the other hand, here's the kind I'm most often called on to do." He picked up a portrait of Rosemary Lane (Figure 4)—a picture which will entitle the actress to all the publicity adjectives.

"Not all faces," Hurrell explained, "can take shadows. I used two lights here, and the key light is straight-on right from the camera lens. This straight-on light is not interesting, but it makes the eyes look bigger and is generally more flattering. But that light couldn't carry the whole load and make an unusual picture. This other light from the side—sharp, strong, booming in hard from a low source—gives the face and the picture a vitality they wouldn't otherwise have. It seems to give detail and character in several ways; it defines the nose and models lips and cheeks on that side. It also makes light-flecks on eyelids and forehead, and leaves a fine shadow from the flower."

"And that's it," spoke the camera ace, setting aside the last of his photographs he'd been discussing. "It's the whole story, as far as I'm concerned. Think of the shadows. The things to play with are the shadows. They'll give you all kinds of chances for originality. The things to make decisions about are shadows. Should you light them up or not?"



"Ann Sheridan"

George Hurrell

Hurrell puts more oomph into Ann Sheridan than even Ann knew she had. Her face confronts the photographer with a problem, because her cheekbones don't stand out, her cheeks don't go in. The only places for shadows are around the eyes and lips.

Focussing With Supplementary Lenses

Bruce Cole

THOSE who get a kick from making their own equipment have probably discovered that lenses from dime-store spectacles work very satisfactorily as supplementary lenses in copying, in table-top photography, and in taking close-ups.

And they've also discovered that it's very difficult to determine the exact distance at which a minicamera equipped with such an auxiliary lens or combination of lenses will focus an object sharply.

Ground glass in the back of the camera isn't much help, for even with a magnifying glass the image is so tiny that it's hard to ascertain the exact point where focus is sharpest. The method described below is simple and accurate.

On a sheet of cardboard or paper draw a diagram similar to Figure 1 but without the lettering. The length of the lines will vary according to the distance at which you're working. C-D must be at right angles to A-B, and the four other lines are parallel to it and at intervals of one inch.

Lay a ruler across them at such an angle that the distances B-E and B-F are exactly four inches and draw the line E-B-F. Your ruler will cross one of the parallel lines every two inches when it lies along this line, giving you an accurate scale from which to work.

Lay the diagram on a table with A toward the edge. Set up your camera, with the auxiliary lens in place, so that the axis of the lens lies directly along A-B and about an inch above it. Figure 2 illustrates the set-up.

You probably have some idea of the approximate distance from the lens at which an object will be in focus. If you estimate this distance as 15 inches, adjust the diagram so that B is exactly 15 inches from the camera, making sure A-B remains in line with the lens axis. (Since you may be substituting other lenses later, it's wise to make all measurements from the front of the camera instead of the lens.)

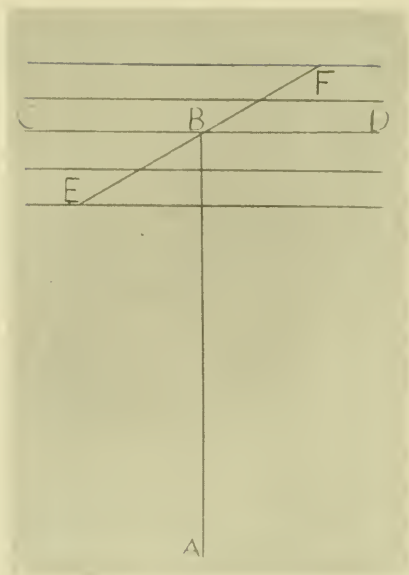


Figure 1

Stand the ruler on edge along E-B-F with the numeral 6 directly above B and prop it at the ends so it will remain vertical. Open your lens to its widest aperture to reduce the depth of field to the minimum and take a picture of the ruler.

When it has been developed and enlarged you'll have one similar to Figure 3. If your estimate was correct the 6 will be in sharp focus. If some other point on the ruler is in better focus than the 6 you can compute the amount of error, remembering that each inch on the ruler represents only one-half inch in distance from the camera.

Figure 3 was taken with an Argus equipped with two supplementary lenses and placed so that the front of the camera case was just $13\frac{1}{2}$ inches from B. The area of sharp definition extends from $5\frac{1}{2}$ to 7 on the ruler, which shows that at $f/4.5$ the depth of field is only $\frac{3}{4}$ of an inch. Since the depth of field extends only half as far in front of the point of focus as behind it, we know that the 6 lies directly on the point of focus and that anything which is from $13\frac{1}{4}$ to 14 inches from the camera will be in focus with this set-up.

Had the area of sharp definition extended from the figures 7 to 10 the depth of field would have been $1\frac{1}{2}$ inches, with the point of focus one-third of the way back into that field, or at 8 on the ruler. Since 8 lies on a line one inch back of C-D, it would indicate the camera should be $14\frac{1}{2}$ inches from the object to be photographed. Similarly, if it were found the point of focus lies at 5, the camera distance should be reduced to 13 inches, since 5 is one-half inch in front of C-D.

If you have no idea of the distance at which your camera should be placed for the test it will be necessary to take several pictures, carrying the distance about six inches on each—say at 15, 21, and 27 inches. But be sure you keep a written record of the exact distance from your camera to B in

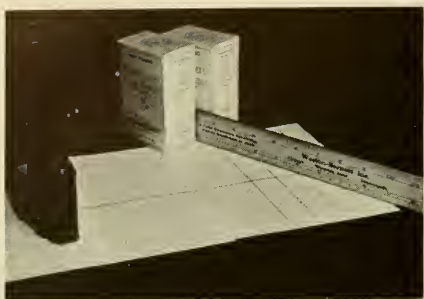


Figure 2

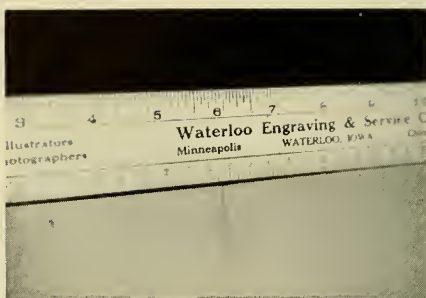


Figure 3

each picture. In order to avoid confusion of the negatives it might be well to place, just behind the ruler, a different object in each picture to identify it.

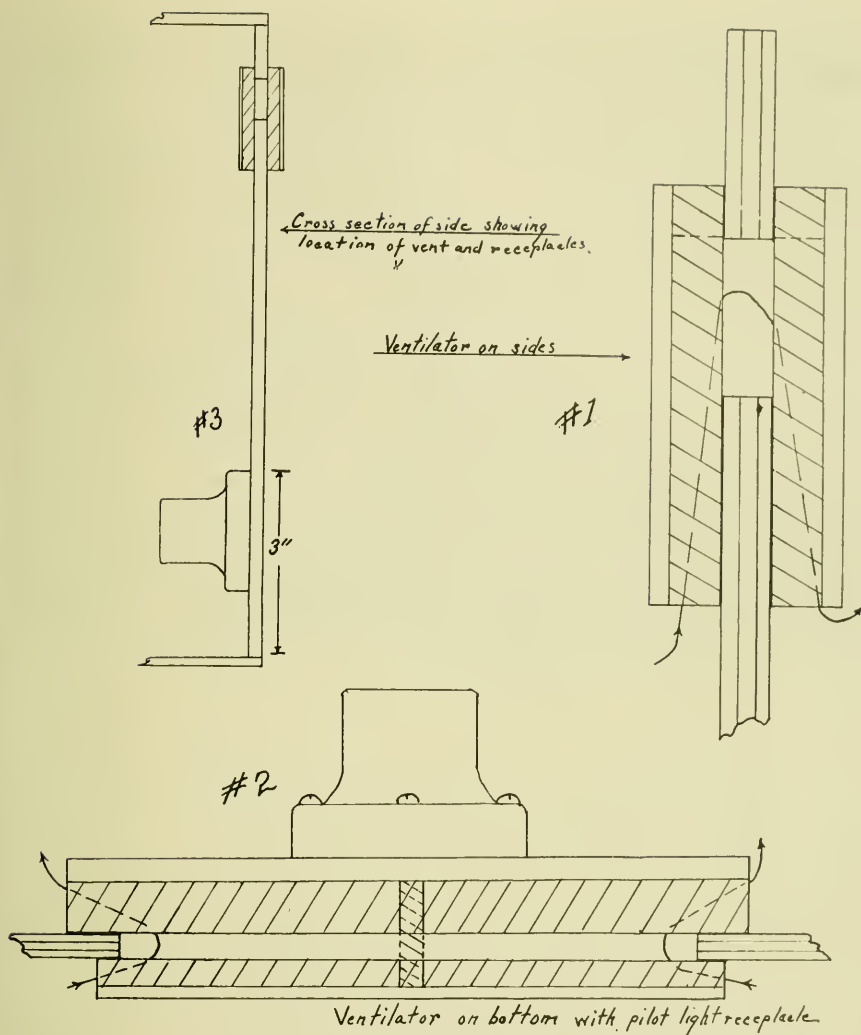
After you've determined the focal point for that lens combination, take another picture, using the same set-up but stopping your lens down to the smallest aperture and increasing the exposure accordingly. This will reveal the depth of field for the aperture you'll be using with most of your close-up work. The reason for using the widest aperture on your first test is that with a shorter depth of field it's easier to determine accurately the point of sharpest focus.

De Luxe Printer

Theo B. Younger

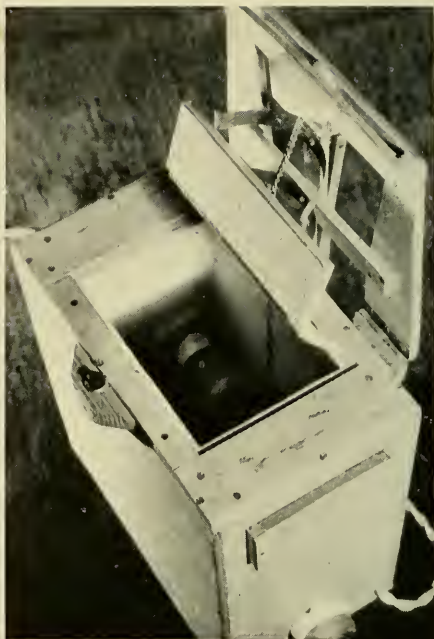
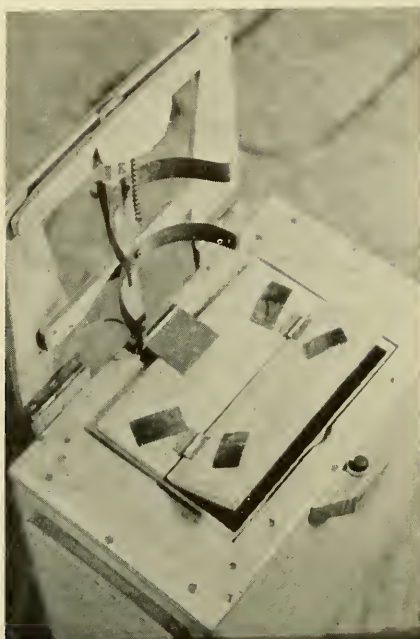
FOR long periods of time we users of cameras giving pictures up to and including 5x7 inches in size have been struggling along with printing apparatus ranging from the printing frame to crude boxes constructed in a hurry or in a haphazard fashion, and have longed for sufficient affluence to purchase a regular printing machine. After struggling along in this fashion for about a year, I "got my dander up" and violently discarded all my frames and boxes and decided that now if I were to make any prints, I would have to build a machine, and when doing so, would make it a good one. In as much as I have been enthusiastic about this creation of mine, I shall pass the good word along to you. Although it looks and works "professional," anyone who knows how to use a hammer, saw, drill, and a jackknife, can easily duplicate my work. Sounds simple, doesn't it, and the funny part of it is that it IS simple! Here's how.

Purchase your materials as listed and cut your plywood ($\frac{1}{4}$ " 3 ply) to size. Cut the openings in the sides for the ventilators as shown in the drawing and assemble them, coating the inside of the light traps (ventila-



Figures 1, 2 and 3

tors) a dull black to exclude the light. Also assemble the light trap on the bottom as shown in Figure 2. Fasten the lamp sockets in place and assemble the box, but don't put the top on yet. Line the box with asbestos paper to protect the wood from the heat, fastening it in place with small tacks. Put on the block which holds the contact switch and wire it according to the wiring diagram. Install the snap switch and complete the wiring. Now fasten the top in place. BE SURE THAT ALL CRACKS ARE LIGHT TIGHT! Next assemble the framework, fasten the two short tapered pieces to the back of the box $4\frac{5}{8}$ " apart, and install the hinges. The heavy springs are punched in the middle for a single screw, and the ends turned up a bit to avoid scraping the brass plates on the top of the platten. The platten itself is made from the two pieces of plywood, con-



Two Views of the Finished Printer

nected with the two 1" brass hinges, the faces being covered with felt (and the heavier the felt, the better), glued in place. The platten hinge which is listed as one of three 2" hinges (the others for the framework hinges), should be a "T" hinge, or have one wing 1½" wide, and should be fastened to the platten as shown in the photograph. The stick with the small pulley (the pulley may be merely an old dry cell battery terminal) is fastened to the back of the box so the pulley is just below the point where the front (or upper) spring is fastened, when the framework is in an upright position. A cord from a screw eye in the framework at this point is fastened to the coil spring, which, in turn, is secured with a screw 3¾" from the bottom of the box. This cord, pulley, and spring arrangement serves to bring the framework to an upright position when not held down, and so automatically raises the platten when an exposure has been made. The platten is connected to the framework with a 2½" length of light chain or cord in such a manner that, when the framework is in an upright position, the platten is raised from the glass sufficiently to allow freedom in placing and judging the negative and paper. However, this cord or chain should not be too short, else the front spring will catch on the upper edge of the platten the next time it is pulled down. A little experimentation will easily determine the correct length if 2½" does not work exactly right. Now mark the position of your opal glass, and tack pieces of thin wood the same thickness (or a trifle thicker) as your glass to the top of the box to form the recess for the glass. Varnish the whole thing, and your printer is complete.



*The Printer at
the Time of Exposure*

It is simple, after all, isn't it? And then, too, you have a printer with some features which are not found even in purchased machines!

LIST OF MATERIALS

Plywood:

- 2—11x12 for front and back.
- 2— 6x12 for sides.
- 1—11x6 $\frac{1}{2}$ with 6 $\frac{1}{2}$ x4 $\frac{1}{2}$ rectangular hole in it for top.
- 1—11x6 $\frac{1}{2}$ with hole 3 $\frac{1}{2}$ x5 $\frac{3}{4}$ for bottom.
- 2—6 $\frac{1}{2}$ x2 $\frac{1}{4}$ for divided platten.
- 2—4 $\frac{1}{4}$ x2 (tapered to 1 $\frac{1}{4}$ at one end) for hinge supports.
- 2—7 $\frac{1}{4}$ x2 (tapered to 1" at one end) for framework.
- 2—7x $\frac{5}{8}$ for front crosspieces of framework.
- 1—4 $\frac{1}{4}$ x3 $\frac{3}{4}$ for front spring support.
- 1—7x $\frac{7}{8}$ for center crosspiece of framework (rear spring support).

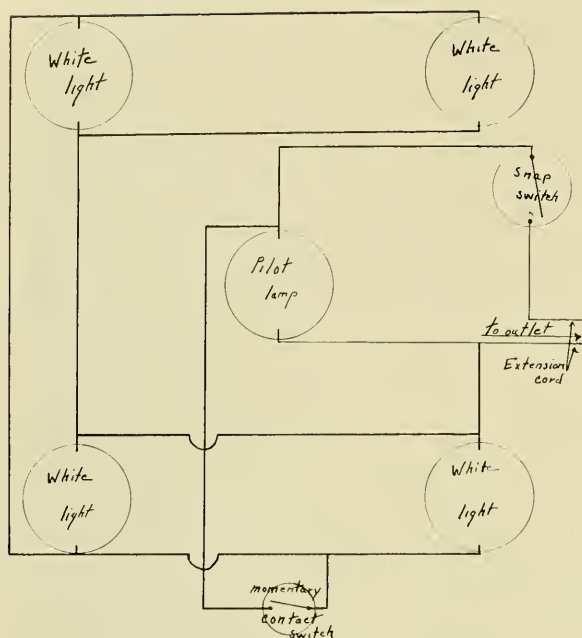
Thin wood:

Can be obtained from WOODEN cigar boxes—avoid the cardboard ones.

- 4—2x4 $\frac{3}{4}$ for side ventilators (light tight).
- 2—5x6 $\frac{1}{2}$ for ventilator on bottom (light tight).

Miscellaneous:

- 3—2" brass hinges.
- 2—1" brass hinges.
- 1 wooden block fastened to framework to make contact with switch.
- 1 wooden block $\frac{1}{4}$ x2 on which to mount platten hinge.
- 1 momentary contact switch (small size).



Wiring diagram.

- 1 wooden block recessed to accommodate above switch, fastened to front of box (connections made from inside).
- 1 6" light coil spring (to operate platten return).
- 2 6½" heavy flat springs for contact pressure (may be cut out of an old clock or phonograph).
- 1 small pulley on a 9" stick of wood fastened to back of box.
- 4 brass plates on top of platten to protect the wood when the springs make contact against it.
- 5 standard porcelain lamp sockets (exposed wiring type).
- 1 snap switch.
- 4 40 watt lamps.
- 1 red safe light for pilot light (small size).
- 1 5x7 flashed opal glass.

Asbestos paper for lining of box.

Screws of various suitable sizes.

Tacks for fastening asbestos paper in place.

Varnish for outside finish.

Electric wire:

Heat resisting wire for inside circuit.

Ordinary extension cord to service outlet.

3 screw eyes for chain connecting platten and framework and for cord to coil spring from back of framework.

1 2½" small chain.

Cord from coil spring to framework.

The recess in the top for the opal glass is made by tacking thin wood in place instead of trying to cut a recess in the plywood top of the box.

Cinema Section

Edited by

William A. Palmer

Lettering For Titles

William L. Morgan

MANY an otherwise good amateur movie is marred by clumsy, carelessly made titles. Yet attractive lettering is not difficult to do: it requires no inherent artistic ability. Rather is it based on a knowledge of the character and form of the individual letters and the fundamentals of good spacing, plus, of course, a certain amount of skill gained through practice.

It is surprising, considering the constant association we all have with the printed word, how few of us are really acquainted with the precise form of the letters themselves. Good interpretations of the alphabet vary in details, but the basic character of each letter remains unchanged. Since the primary function of words, and hence letters, is to convey meaning, no alphabet which departs radically from the familiar form can long survive.

The letter "A" in Figure 1 is shown in styles varying from the traditional Roman to modern block serif. Though differing as to thick-and-thin lines, serifs, and relation of height to width, basically the form is the same and is instantly recognizable.

On the other hand, letters departing radically from the familiar form, as those shown in Figure 2, are wholly unsuitable for titles, which must register their message within a limited period of time.

The beginner will do well, then, to familiarize himself with simple, easily-recognized letter forms, making no attempt to "individualize" the characters with flourishes or other innovations, at least until he is thoroughly grounded in the basic forms.

Figure 3 is a simple sans-serif (or "Gothic") alphabet. The figure shown at "a" forms the skeleton of nearly all the straight-line letters (E, F, H, etc.), as well as establishing the proportion of the letters B, J, P, R, S, and U. The balance



① VARIATIONS IN STYLE OF
A FAMILIAR LETTER FORM



② FORM DISTORTED FOR SAKE OF
'NOVELTY'. RESULT: ILLEGIBILITY

Figures 1 and 2

of the curved-line letters (C, D, G, O, and Q) are based on a full circle. The letters M and W are exceptions in width, being as wide as they are tall, while all of the other letters (except I, which is a single stroke) are two-thirds of their height in width. These proportions are, of course, purely arbitrary; for example the width of the letters might be extended or condensed and the basic character would remain the same. Then, too, in many well-designed alphabets a number of the letters vary greatly in width. However, the alphabet shown, based on frame-work the same size and proportions for each letter, is easy to learn to make, and being simple and legible, is very suitable for title work.

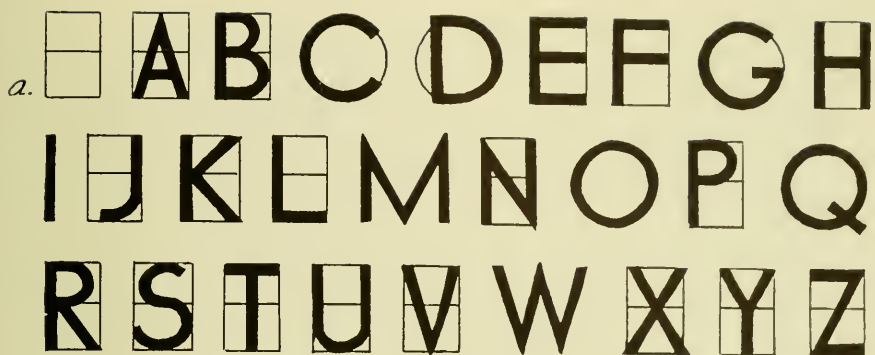
Good spacing is as important to the appearance of the finished lettering as the shape of the letters themselves. A certain amount of "feel" for correct spacing will come with practice. Space between letters should be optically (instead of mechanically) equal. That is, the whole area of space between any two letters should be taken into consideration, rather than the distance between their full widths. The word "WATCHING" in Figure 4 shows this. Although the space between each letter in the uppermost example is mechanically equal, the latter portion of the word looks quite crowded. The lower example shows the word more correctly spaced, the space areas being very nearly equal. In general, letters made of vertical lines, such as H or E, should be spaced wider than curved letters, such as O and C.

Space between words should be about the width of an average letter. However if the letters are spaced out somewhat ("letter-spaced"), space between words must be increased to keep the words from seeming to run together.

Figure 5 shows the materials useful in making your own lettered titles.

a. *Drawing-board.* A smooth bread-board can be used. The drawing-board is preferably of soft wood, is free of knots and surface irregularities, and must have a perfectly straight left-hand edge for the T-square.

b. *T-square.* For drawing guide-lines and truing-up horizontal lines in the letters. Preferably one with a transparent edge. It should lie perfectly flat. Test by sighting along edge.



③ BLOCK LETTER ALPHABET BASED ON A SIMPLE STRUCTURE

Figure 3

c. *Triangles*. At least one, for drawing vertical lines. Either a 45-degree or 30-60-degree.

d. *Compass*. For drawing circles.

e. *Paper*. A pen-and-ink bristol, such as Strathmore or Collins. At least two-ply. The kid finish is better for lettering than the plate finish.

f. *Pen Holder and Pens*. The latter will depend upon the size of the lettering you will do. For small letters (quarter-inch to half-inch) use Gillott's 303 or 404. For larger letters, up to an inch or so, use the smallest size Speedball (A-6 or B-6) for outlining the letters, and a small brush for filling in. For letters still larger, it is quicker and easier to work direct with the brush over the pencilled form.

g. *Brushes*. For filling in letters. A 1 or 2 for small letters, a 4 or 5 for larger letters. For direct lettering with the brush, get the standard chisel-end lettering brushes in several sizes.

h. *Ink*. Black water-proof india ink for black-and-white titles. Dilute with water for grey letters. For Kodachrome titles use colored inks or show-card colors.

i. *Pencils, Eraser, Thumb Tacks*. A 2H or 3H pencil for guidelines, an HB or B for preliminary blocking in before inking. Soft red rubber eraser or Artgum.

Thumb-tack a sheet of pen-and-ink bristol to the drawing board, preferably over a couple of sheets of smooth newsprint or wrapping paper, to provide a slight cushion and to offset any defects in the drawing board. Layout with T-square (for horizontal lines) and triangle (for vertical lines) a rectangle the size of the easel frame on your titler. If shooting without a titler, a rectangle 15½ inches by 22 inches will be in correct ratio for the 16mm camera aperture.

Whether you are working small or large, always draw horizontal guide-lines to set the limits of the letters' height. Draw a light vertical line down the center of the card. By counting the characters and starting the middle character on this line, it will be easier to center the lettering. Count each word space as one character, the letters I and J as one-half character, and all full-round characters in the alphabet shown (G, O, Q, etc.) as well as M and W as one and one-half characters.

WATCHING WATCHING

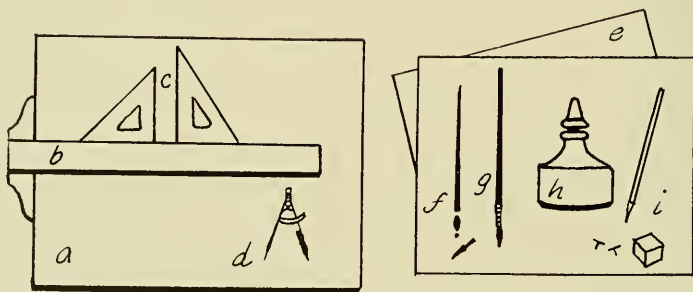
④ MECHANICAL VS. OPTICAL SPACING

Figure 4

Block in the lettering lightly and adjust the spacing between letters and words. Then true up the vertical and horizontal lines with the triangle and T-square, and, if necessary, use the compass to draw the curved characters. Try to gain the knack of blocking-in free-hand, however. By so doing, you will get to work faster, and you will gain more of the feel of the spacing and the letters as a whole.

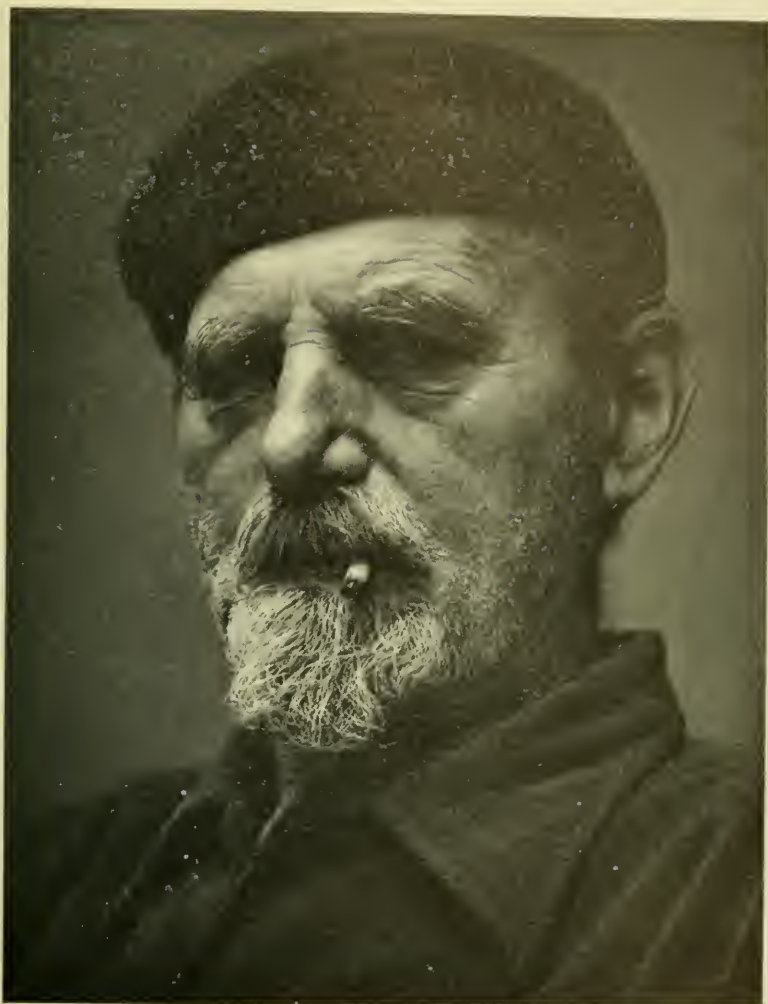
Follow the outline of the letters with pen and ink, filling in afterward with pen or brush, being careful not to flow the ink on too generously, as the pools formed are likely to run over the letter outlines. Let the ink dry thoroughly before erasing the guide-lines.

No hard-and-fast rule can be given for the placing of the words on the title. In general, the lettering should fill the space without seeming to be crowded, with the "weight" slightly above center. Be careful not to bring any of the letters too close to the edges of the title card, as they might be cut off in projection. One or two simple decorative accents, preferably tying in with the subject matter of the title, will liven up a title occasionally. Avoid, however, meaningless flourishes and borders. Keep in mind at all times the primary function of the movie title: to deliver a message boldly and distinctly and then be on its way.



⑤ MATERIALS NEEDED FOR LETTERING

Figure 5



"William Ritschel, N. A."

Fred Herrington

First Award—Advanced Class

■ The present print and the picture which was shown in this department last month offer convincing evidence that Mr. Herrington has achieved a high degree of skill in outdoor portraiture. He has mastered a technique—his problems for the future have to do with the refining of the expressive qualities of his pictures; with the creation of more interesting poses and compositions. Since many an amateur portraitist faces these same problems it may not be amiss to make a few suggestions concerning the problems indicated.

The great majority of amateur portraits show a large head, almost filling the picture space, with a minimum of supporting base formed by the shoulders. The present picture is as good a thing of this kind as one could ask for. This is admittedly the easiest way to make a portrait, but (barring the rare exceptions which make the rule) it is also the least expressive and the least satisfying artistically. The reader can readily prove this to himself by studying the work of such photographers as Eschague, Steichen, Mortensen, Weston and Julian Smith. (Several examples of Dr. Smith's work will appear in our December issue.) Portraiture in other mediums will also offer ample testimony in this regard. Study such work and notice how the mature artist uses more than the head. The hands, the arms, the torso, the lines of the costume, etc., are used to enhance the total effect. Here are clear and inspiring guideposts which point the way to those who wish to learn.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; $6\frac{1}{4}$ " Zeiss Tessar; 1/10th sec. at F:6.3, outdoors in shade; E. K. Panatomic cut film in DK-76; 11 x 14" print on Gevaert Gevaluxe, in GA-61.

Second Award

Advanced Class



Lionel Heymann,
Chicago, Ill.

The shadow ties the figure back to the little bush, and the grass at the right acts as a check on movements to the right. All these factors combine to make a nicely balanced composition. But the *why* of placing the figure so is the really important aspect. Mr. Heymann has clearly seen that this arrangement intensifies the feeling of the breeze sweeping around the figure. Trim the left half of the picture away and this feeling all but disappears. And so we see that the composition has been built to carry the feeling, the mood, the spirit of the picture; which is exactly what all compositions should do.

Data: 8 x 10" bromide print.



"Alpine Dam"
Fred P. Willcox,
San Francisco, Calif.

Third Award

Advanced Class

■ This picture is quite obviously built upon the very interesting leading line formed by the dam and the curve of the bank. One or two who have seen this picture have suggested that the bank in the upper left on the far side of the water constitutes a distracting spot and should therefore be trimmed away. To our eye such trimming would gravely injure the composition. The inclusion of the farthest bank helps greatly to turn the eye to the right at the point where the nearer bank turns right. In short it holds the eye in the picture space. Without the control exercised by the farther bank there would be grave danger of the eye slipping out of the picture at the point where the nearer bank reaches farthest to the left.

Data: Illustrators Special Camera; 180 mm. Elmar lens; 1/75th sec. at F:6.3, on E. K. Panatomic X in DK-20; 11 x 14" print on Dassonville Charcoal Black.

Fourth Award

Advanced Class

■ This picture tells its story very well. The worn masonry suggests an old civilization that is adopting modern ways at a leisurely pace and thus supplements the activity of the hardworking woman. The black area at the left keeps the eye from wandering in that direction and also intensifies the feeling of brilliant sunlight by means of the strong contrasts which it sets up. The tone values fall off toward the lower right corner so that this area has a weak appearance. Slight dodging in would correct that. We do not really need as much space above the figure as is present and the modern looking sign is somewhat out of character and tends to catch the eye. We therefore think the picture is improved if we trim down from the top until the sign is eliminated.

Data: 6 x 6 cm. Rolleiflex Automatic; 1/100 sec. at F:11, on Agfa Isopan; 11 x 14" print on E. K. Bromesco.



"Balkan Woman"

*Toso Dabac,
Jugoslavia*

Fifth Award

Advanced Class

■ Mr. Jaconelli has discovered interesting picture material in the long converging lines of vegetation undulating off into the distance. To our eye however, he has reduced the effectiveness of this material by printing in a cloud which is much too interesting in itself to perform its proper function in this picture. The cloud is so strong that we have almost two complete pictures. One, the sky with a small amount of landscape, the other the landscape with a small amount of sky. Of the two the landscape is the most effective. So we suggest trimming away about three fourths of the sky area and then taking a little bit off the left and a larger amount off the right to re-establish satisfactory print proportions. Notice that with this trimming the landscape gains greatly in power. With things as they are the strongest point is where the rays of the sun break through the clouds, and the landscape is redundant.

Data: Foreground on E. K. Super XX in DK-20; clouds printed in; 11x14" print on Agfa Brovira Royal.



*Guy Jaconelli,
Wheaton, Ill.*



"Dusk"

Bernard Wynne, Sierra Madre, Calif.

First Award Amateur Class

■ This picture affords a good example of the advantages to be derived from fully realizing the finished picture in advance of tripping the shutter. The full power of the picture would hardly have been obtained without such realization for it is the result of proper exposure and filtering plus a wise choice of lighting. The principal theme here is the geometrical form of the barn and this is made more emotionally effective by showing it in the mood of late afternoon. Notice that these two objectives work together. The low angle of light plus the action of the red filter sets the mood, but they also render the barn so that it can be seen as a simple and strong geometrical form. The strong contrasts give bulk and solidity to the structure, enhance the apparent luminosity of the brightly lit fronts and hide much unwanted detail in the shadows. Thus we see the necessarily close connection between conception and execution. Without the first the second can be only wild guesswork.

The grasses in the foreground are pretty well lost against the dark parts of the barn, but it would have been better to remove them before making the exposure. We like the balance of the composition better when enough is trimmed from the right to eliminate the line of the hilltop to the right of the barn. Some will no doubt object to this because it gives the picture a square format.

Data: 6 x 6 cm. Rolleiflex; 7.5 cm. Zeiss Tessar; $\frac{1}{2}$ second at F:32, with Red filter, 5 P.M. in July; Panatomic X in D-76d; 11 x 14" print on E. K. Kodabrom, in D-72; print reduced.

Second Award

Amateur Class

■ Perhaps we can use this picture to point to an error that appears rather often in pictures which include a strong foreground against a subdued distance. Notice that in this picture the two main planes are differentiated both as to tone value and focus. The mistake that is all too commonly made is to establish the differentiation only by focus. Such a picture is seldom satisfactory, for a recession of tone values is by far the more convincing way to establish depth in a picture. If we want to emphasize receding planes we should select a rather hazy day, use orthochromatic film without a filter, or panchromatic film with a blue filter, and expose for the foreground objects. Avoid any filter which will cut out the blue, such as yellow, orange or red filters, for these will have the effect of bringing the distance closer.

Data: 11 x 14" bromide print.



"Keyboard of Industry"

Henry M. Mayer,
Lakewood, Ohio

Third Award

Amateur Class

■ Mr. Rundle has done an excellent job of organizing this material. He has included just enough of the building to suggest a large and impressive structure. The lighting sets up a well ordered movement through the picture by carrying the eye back, while the circle of light in which the foremost figures are placed establishes a very strong point of emphasis. The figures are very well placed except for the messenger boy with the package. He is standing still and appears to be looking at the camera, and for those reasons strikes a false note. The picture would be better without him. We think that the print as a whole would have a richer appearance if there were just a shade more tone value in the highlights.

Data: 2¼ x 2¼" Zeiss Super Ikonta B; Agfa Superpan Press, in E. K. DK-20; 11 x 14" print on Agfa Cykora Kashmir White, in Agfa 135.



Richard Rundle,
San Francisco, Calif.



"Reginald Bennett"
C. B. Phelps, Jr.
Grosse Pointe, Mich.

pan Press cut film in Champlin 16; by 3 No. 4 Photofloods; 13 x 16" print on E. K. Vitava Opal P, in D-52.

Fourth Award

Amateur Class

■ This head is nicely modeled, the expression is good and flesh textures are well maintained. We could wish for a somewhat more substantial base in support of the head, but what bothers us most is the model's right arm. The ruffled up sleeve contains several strong highlights and is out of focus, with the result that it becomes rather a strong distraction. It catches the eye particularly where the sleeve runs into the face, since the difference in focus is most noticeable at that point. It also calls attention to the empty lower left corner. Such an empty corner is a very common thing in large head portraits, but it is almost always a weak point in the arrangement. This can often be filled in by slightly altering the pose, particularly by carrying the right arm outward from the body. It should be done whenever practical for it eliminates an awkward and weak area in the composition and adds stability to the arrangement by broadening the base in support of the head.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ Ica Reflex; 16.5 cm. Zeiss Tessar F:2.7; $1/15$ th sec. at F:11, on Agfa Super-

Fifth Award

Amateur Class



"Night Is Drawing Nigh"
J. O. Fitzgerald, Jr.
Richmond, Va.

as full an exposure of the negative as is practical and as soft a print as is possible without flattening the effect of the whole. There is perhaps a bit more space on the right than is necessary, so it would not hurt to trim about one inch off that side, in the 11 x 14" print.

Data: Leica G; 35 mm. Elmar lens; $1/60$ sec. at F:6.3, on E. K. Panatomic X, in DK-20; 12X enlargement on Agfa Brovira Kashmir Ivory medium, with some dodging.

■ The trees shown here form a very interesting group and the sky background fits in nicely. A difficulty which one always runs up against with material of this kind is that the trees come out absolutely jet black in the print. Such a very complete silhouette is likely to make the trees appear as if they were cut out of black paper and pasted on to the print, which is of course unpleasant artistically speaking. We do not see the trees in a scene such as this as dead black, and for this reason as well as the one mentioned above it is well to try to print the trees a few tones off of black. This means

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Fred P. Willcox, for the Aremac Camera Club; Fred Herrington, for the E.P.I.C. Pool; Lionel Heymann and Guy Jacanelli, for the Fort Dearborn Camera Club; and Toso Dabac, for the Fotoklub Zagreb.

The following won prizes for their clubs in the Amateur Class: Richard Rundle, for the California Camera Club; J. O. Fitzgerald, Jr., for the Camera Club of Richmond; Henry M. Mayer, for the Cleveland Photographic Society; and C. B. Phelps, Jr., for the Detroit Camera Club.

The following prize winner has no club affiliation: Bernard Wynne.

Contributing Clubs

Aremac Camera Club (San Francisco)
California Camera Club (San Francisco)
Camera Clique (Denver, Colo.)
Camera Club of Richmond (Va.)
Cleveland Photographic Society (Ohio)
Dallas Pictorialists (Texas)
Detroit Camera Club (Mich.)
E.P.I.C. Pool of San Francisco
Fort Dearborn Camera Club
Fotoklub Zagreb (Yugoslavia)
Kamera Kranks Klub (Durham, Calif.)

Manhattan Camera Club (N. Y.)
Missoula Camera Club (Mont.)
Oklahoma Camera Club (Okla.)
Pictorial Camera Club of San Antonio (Texas)
Pictorial Fellowship (Long Beach, Calif.)
Sierra Camera Club (Sacramento, Calif.)
Signa Phi Nothing (Sacramento, Calif.)
Solano Camera Club (Fairfield, Calif.)
Utica Camera Club (N. Y.)
Yellow Springs Camera Club (Ohio)

Standing of Clubs

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	54
Indianapolis Camera Club.....	11
Fotoklub Zagreb.....	9
Fotoklub Ljubljana.....	8
Pictorial Photographers of America.....	6
Miniature Camera Club of Oakland.....	5
Los Angeles Camera Club.....	3
Manhattan Camera Club.....	2

Large Clubs Amateur Class

California Camera Club.....	17
Camera Club of Richmond.....	11
Detroit Camera Club.....	11
Cleveland Photographic Society.....	7
Miniature Camera Club of Oakland.....	4
Photographic Society of San Francisco.....	4
Amherst Camera Club.....	2
Indianapolis Camera Club.....	1
Sierra Camera Club.....	1

Small Clubs Advanced Class

The Pack Rats.....	18
Yellow Springs Camera Club.....	12
E.P.I.C. Pool of San Francisco.....	5
Aremac Camera Club.....	3
The Camera Clique.....	2
Aluminum Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool of San Francisco.....	18
Dallas Pictorialists.....	12
Signa Phi Nothing.....	5
Pictorial Camera Club of San Antonio.....	3
San Jose Camera Club.....	3
Vancouver Photographic Society.....	3
Florida Camera Club.....	2
Fresno Camera Club.....	1
Midwood Camera Club.....	1

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired, on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue.

What Is Good Photography?

(Continued from page 511)

Two: Art is an expression of order. Is there any doubt of this? If art is not the successful expression of orderly relationships, what is it? Upon examination any example of creative effort can be considered as art only in direct ratio to the success of its structure, of its organization. When applied to photography, this conception discloses a fact that may come as a surprise—the fact that it is not essential to record romantic nature, **or even nature of any kind**, in order to create a work of art: It is essential only to achieve ordered relationships of the factors included in the work, whether these factors be the forms found in objective nature, or whether they be purely abstract and meaningless forms.

Three: Art must not fail to express its period. Any attempt to step out of period is foredoomed to failure. Art must concern itself with its time, its age, its "Zeitgeist" or time-spirit. Art—any form of art, including photography—cannot have the same form today, our day of speed and light, as it had a few decades ago when we lit our homes with kerosene lamps or gas, considered saving a virtue, and drove behind a horse at ten miles an hour. No matter how deeply many of us may revere the past, it is doubtful if that reverence can be carried over into the sphere of actual contemporary production of art. Art changes just as the modes of motor-cars change, though perhaps not as rapidly, and an attempt to paint or to photograph in the manner of yesterday would be about as sensible as attempting to drive an early Oldsmobile on today's streets.

Four: To be true to itself, art must avoid imitation—in the sense of one art imitating another. That is to say, for instance, that oil painting should not try to look like cloisonné. Carved sculpture, which by its nature should be compact and solid, should not try to imitate cast metal sculpture, for metal, being of stronger substance, naturally can—and therefore is free to—make use of thinner forms. Pen and ink drawings should not try to look like etchings, and vice-versa. Cast cement should not be made to try to imitate the type of ornament which arose from a carved stone technic—something we see attempted on almost every public building in this country by esthetically blundering architects.

Although it is far from the purposes of this paper to deal with architecture, the subject affords a beautifully apt illustration. Remaining perfectly within the natural limits of their racial spirit, available structural material, and intended purposes, the Greeks evolved one of the world's most perfect architectures. This the Romans borrowed, changing it—and so debasing it—in an attempt to reform it to their needs, blind to the fact that a perfect thing cannot be reformed without loss of its perfection. From the Romans we in turn borrowed this architecture, debasing it again and still more, imitating a carved marble architecture with steel and concrete, with a result stupefying to our creative sense and completely inappropriate to the spirit of our times and

our people, to the nature of our building material and methods, and to the uses to which it was to be put. To this result has been applied one of the most derisive definitions of our time, branding it as "**The adding of one thing to another in imitation of a third which, if genuine, were undesirable!**"

Returning to my point that art must be true to itself, it is a basic principle that each art must work within its own spirit; must regard as inviolable the natural properties and propensities of its medium. Stone must be allowed to remain stone, Greek architecture was perfect and appropriate only in Greece of two thousand years ago, metal must be treated as metal, cast concrete must remain honest cast concrete, paint must remain paint, and pen drawings should be content to remain pen drawings. There can be no excuse whatsoever for any attempt to make any art look like something that it is not. The only—let me repeat that for the fullest possible emphasis—the **only** right course for each worker is to strive his utmost to bring out the natural and essential qualities of the particular medium in which he is working. By this means, by this point of view, and **only** by this, may a worker in any of the arts be successful in what he undertakes.

Now, let us see what happens if we try to link up all this still more closely with photography. In doing so, we are brought at once to the heart of the matter: **What are the essential qualities of photography?** These are difficult to establish; perhaps none of us will agree upon them. But as this country, to our great good fortune, is neither Communist, Fascist nor Nazi, each of us has the privilege of saying what he thinks. Taking advantage of this, I will state my convictions in a series of nine statements or propositions.

1. The word "Art" is a term referring to subjective elements, to qualities of interrelationship. These interrelationships are called "creative" because they are formed or created out of human knowledge or feeling for design or organization.

2. The essential subject of photography is **form**—not babies nor dogs nor pretty girls nor romantic landscapes, but **form** and the relationships of form, including **texture** and **line** and **light** as associates of form.

3. The creative element—that is to say the art—in a photograph exists in its relationship of line, form and texture, and not at all in its **subject**, its **sentiment**, or its **meaning**. It may possess these qualities, as a man may possess a hat, spats, and a cane, but they are not essential.

4. Action shots and "candid camera" shots are of no importance as art unless by chance or the skill of the operator they possess technical qualities and form-relationships which lift them into something more than mere records.

5. Color is of minor importance. This may seem a strange and a mistaken statement in view of the rapidly growing interest in this branch of photography. As a result of the development of Kodachrome and other poly-

chrome methods, we have heard much about color, and the end is not yet. I have no doubt still more attention will be paid to it, and the great manufacturers will become greater. These considerations do not, however, tempt me to change my statement that color is of minor importance, since **color without form can have no meaning whatsoever, while form without color may achieve a complete esthetic result.** Thus color can never be more than a sweet accompaniment of creative form organization.

6. Any technical procedure which causes photography to resemble any other art—which causes it to seem in the slightest degree like painting or drawing or etching—is **completely and indisputably bad photography.** It follows therefore that all manipulated bromoil prints and gum prints, all paper negatives, diffusion lenses, diffusion screens and other trick devices are absolutely out insofar as fine pictorial photography is concerned. None of these can have any possible purpose that does not either reduce clarity or attempt to make photography appear like something other than itself. For related reasons, even rough papers should be avoided, since their use not only reduces possible tonal range, but also may be looked upon as an unconscious expression of the desire to achieve results that are "arty" and illegitimate because unsuited to photography. Texture should be obtained in the negative through a proper use of visual material, and the attempt to gain it through the use of rough paper is as improper as it would be to print an etching on a Navajo rug. The imperative need in printing etchings is to do so in whatever way that will best bring out the beauty of the etched line. Likewise in photography the need is to make prints which will best and most completely bring out the depth, range and quality of the negative. This rough paper will not do. I should say at this point that some or all of the devices, which have been condemned as inappropriate to regular or pictorial photography, may be entirely appropriate in abstract or surrealist photographic experiment.

7. Nature has darks that are deeper than photography can duplicate, and lights that are more luminous. Thus no photographic negative emulsion can equal the full tonal range of nature, and no paper emulsion, since it is seen only by reflected and not by transmitted light, can equal the tonal scale of negative emulsions. There is thus a double reduction of natural brilliance and range, a double loss of tonal vigor, even when the most brilliant paper is used which modern manufacturing skill has created. When, in addition, a still further sacrifice of range is brought about through the use of dull surface paper, rough surface paper and sepia or other colored paper—all of which reduce tonal range and luminosity—we have a photography from which virility has been drained to a point that makes it grey and lifeless.

8. A photograph may be entirely successful technically and as a record while being completely devoid of esthetic and creative elements. The reverse of this, however, is not true. A photograph cannot be an esthetic and creative success which lacks in technical mastery. In this lies the distinction between commercial photography and creative

photography, between the craft of photography and the art of photography. In other words, craftsmanship may suffice for commercial or record photography, while creative photography requires craftsmanship plus an intangible X quality, which is art. It follows therefore that the creative work is much the more difficult to accomplish and much more worth while when accomplished.

9. It is only logical that any instrument should be put to its highest possible use. An astronomer who did not obtain the utmost from a telescope in the matter of penetrating distance would be a poor scientist. A microscopic technician who did not fully utilize the magnifying power of his instrument would not be worth his salt. I hold it to be a proposition of equal truth that the photographer who does not likewise utilize the capacity of his lens to achieve exact overall definition is not a good photographer.

This matter of definition needs to be enlarged upon here, as it is something of a fighting point among photographers. As we are all aware, the nature of lenses is such—I would say the shortcoming of lenses is such—that it is at times difficult to avoid including passages that are indistinct, imperfect, illy defined—in a word, out of focus. Instead of regretting this astigmatic aberration, however; instead of exerting themselves to overcome it; instead of making the need to overcome it a part of their task as artists, many photographers actually look upon it as an advantage. Proponents of hypercritical definition are commonly confronted with the statement that this lack of definition over part of the plate serves a useful purpose, concentrating the attention upon those parts of the print which the operator has been so kind as to get in focus. To my notion this is false reasoning. Instead of directing the attention elsewhere in accordance with this wishful thinking, the blurred edge, the falseness of the diffused passage, will act as a disturbing factor, **drawing the attention** and directing it to those faulty parts of the composition where it is most undesirable, besides confessing a lack of mastery of the camera, or a confused, abecedarian, adolescent conception of photographic ideals.

Before leaving the subject of definition, I would like to express the belief that one of the most significant groups of camera workers ever formed either here or elsewhere was that called "F.64" which originated in 1933, holding its first exhibition in San Francisco in September of that year. It was formed by Ansel Adams, Edward Weston, Imogen Cunningham, John Paul Edwards, Henry Swift, Willard Van Dyke, Sonya Noskowiak and Conseulo Canaga. It was notable because in a period when sound photographic principles were farther from general comprehension and even more apt to meet with antagonism than they are at present, this group announced, and carried out, a point of view far in advance of the practice of that day; in advance still, for that matter, of anything but the best of today's practice. Although the organization unfortunately was short-lived, discussion about it and about its slogan, "F.64," continues to this day.

* * *

In summary, the lines of reasoning, as found in the propositions which have been



"Raygram"

Man Ray

6th International Salon
Pictorial Photographers of America

outlined, point to the surprising and apparently contradictory conclusion that the highest quality in photography is not its photographic quality. Its highest quality would appear to lie in its organization of form, exactly the same as in any other art. This is precisely why it is an art. In substantiation of such a view, it is reasoned that even the most faultless example of the incomparably imitative and tonally rich print-making craft which we call photography must remain merely a commonplace record unless it is lifted into a higher type of creative effort by its fresh and inventive point of view, its organization, its creative design.

Such reasoning should not be interpreted as an undervaluation of everything about photography except its abstract elements; certainly not as an undervaluation of the unique naturalistic contribution it has made, but only as an attempt to analyze it as a commonly misunderstood medium. After en-

deavoring to estimate and outline the subject with a view to establishing what good photography may be, the purpose here, contrary to an undervaluation, has been to urge the elimination of simple minded banalities, such as the imitation of effects proper only to other mediums, which have clouded the worth and beauty of true photography; has been to affirm the right of the finest elements in monochrome photography to a position of equality among other graphic arts; and finally has been to stir the pride of lightcraftsmen by asserting that photography, when understood, is something to be proud of, to be considered an art of its own right, and not something to be disguised under an imitation of some other form of art.

It is reaffirmed that to achieve results which may take a place among other arts, the photographer must come out of the past and face present realities, use present knowledge, concern himself with his age. He must awake to the necessity of re-evaluating habitual attitudes of mind. He must re-examine old antagonisms; he must discard old and outworn points of view. He must renew his vision; he must look afresh with the eyes of today on nature, on art, and on photography. Only out of an attitude such as this can come good work.

Let it be said in conclusion that next to determining the nature of photography, the most essential matter for lightcraftsmen to consider today is **where is photography going?** We may know where it has been and where it is, but what comes next? To go on endlessly photographing landscapes, dogs, cats, children, old women, nude girls and old houses, no matter how well we may learn to do this, would be hopelessly stupid and would end all intelligent interest in photography as an art form. My guess is that abstract and surrealist subject matter may offer a way out. Your guess is as good as mine—why not make it and do it?

As this opens up a wide and contentious aspect of the subject—too wide to consider here and now—it affords a good point at which to come to an end, not with the assurance that anyone has been convinced of anything (one knows the photographic brethren too well for that), but with the hope that a logical and consistent point of view with respect to photographic ideals and practice has been presented. The rest is up to the thousands of serious workers who are trying to demonstrate What is Good Photography.

Correspondence*

From Burleigh Brooks

Dear Sirs:

The expressions of kindly understanding on the part of practically all of our dealer friends of the difficult position in which the unfortunate circumstances abroad have placed us have been so numerous and so

sincere that we feel obliged to take advantage of your medium through which to send them an open letter of thanks.

From a few sources, however, it has come to us that certain of the dealers were disappointed in the stand we had taken, which was beyond their comprehension, and for

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish.—Ed.

this reason we believe a brief explanation might be in order. It must be plain to our friends to whom we are well known that we are not altogether in the position of other distributors of German cameras in this country, the manufacturers of which maintain their own distributing point here, through firms which handle their articles exclusively, and perhaps are controlled by these German firms, from which their policy is dictated and their orders come.

Burleigh Brooks, Inc., is an American organization, Mr. Brooks being a Southern-born American who, incidentally, saw twenty-two months' active service during the World War.

Our firm always has acted and still acts independently of any German firms, which hold absolutely no interest in our organization, and we are accordingly free to devote ourselves now to the advance of the American photographic business. Indeed, we have had for years several very worthy American articles, such as Nikor Tanks and Bee Bee Easels, and have recently added an excellent line of American tripods under our "Bee Bee" trade name, as well as the new Bee Bee Range Finder. It is our intention to go more extensively into this field, for which work we intend to keep our force intact as much as possible, and towards which end we are making every effort to align ourselves with competent American manufacturers of worthwhile products, as evidenced by the various advertisements we have already placed, offering the facilities of our firm to such manufacturers.

We are proud of our organization into the perfection of which much time and effort has gone, and we believe it is unsurpassed on the United States market for the distribution of merchandise to the photographic trade on a small margin of profit.

We have raised certain of our prices, to help us bear the loss in our heavy investment for advertising which will now never materialize, and to meet our overhead during the transition period. A limited amount of most items is on hand, which we hope at higher prices will last for this length of time. Should conditions abroad adjust themselves in the meantime, we will be able to take up the business where we left off, and with our staff intact be in position to carry on as previously. If other importers have not done likewise, we can only assume that it is their intention to dispose of what stocks they have and withdraw from the photographic business completely.

Sincerely yours,
BURLEIGH BROOKS, INC.
B. Brooks.

Infra-Red

Dear Sirs:

Thanks for article on Infra-Red. Much information omitted. What filter or filters were used with illustrations. Author says "If infra-red effect is desired the filter is essential" still he says practically nothing about the use of filters, only lists them. No mention of filter is made in giving exposure data. No filter factor is mentioned in connection with this film. It would seem that some very essential information has been omitted. I would appreciate learning the answers through your pages or direct. If I have noticed this no doubt others have also

if they are interested in this subject and they should be because it's very fascinating.

Sincerely,
R. E. MERVILLE

Los Angeles, Calif.

The author specifically recommends the Wratten No. 25 filter and all the pictures shown with the article were exposed through that filter.

An infra-red emulsion has a much higher percentage of sensitivity to the colors of the visible spectrum than to infra-red, consequently if such material is exposed without a filter the infra-red sensitivity has no apparent effect and the result is substantially the same as would be obtained with panchromatic material. Therefore, since all exposures in which the infra-red effect is desired must be made with the filter there is no point in establishing a filter factor, even if that were practical. It is impractical because the setting up of a filter factor presupposes that the exposure without the filter is accurately known. Such is not the case. Neither the eye nor the exposure meter can tell how much infra-red radiation is present in a given scene. Consequently we must, at present, learn to expose infra-red materials through trial and error.

The amateur has little or nothing to gain by using any other filter than the one recommended. The other filters mentioned are used primarily in scientific work. A full discussion of filters for infra-red would only be appropriate in an advanced technical paper. Those who are interested are referred to the book, *Photography by Infra-Red*, by Clark. —Ed.

Walter E. Noble

September 27, 1939

Dear Sirs:

With this I am sending some portraits of Walter E. Noble, our camera club Maestro, who is perhaps one of the grandest old men of photography in the West. Twenty-three years ago Mr. Noble was one of the leading portrait photographers in Southern California. When the motion picture industry had the portrait photographers do all of their "stills" for publicity, Mr. Noble aided many of the stars to fame. For instance, he made the stills of Mary Pickford in "Tess of the Storm Country." He also did many of the pictures for such people as Charlie Ray, Pauline Frederick, Alice White, also Henry B. Walthal.

About sixteen years ago, Mr. Noble's health broke and he retired, coming to Riverside, where Mr. and Mrs. Noble have been actively engaged in raising turkeys. For several years Mr. Noble taught photography in the Adult Education photography classes, at the Riverside Junior College. At one time he had over 100 students in his two classes. Six years ago he organized the Weno Camera Club, the name being derived from his initials, (W. E.) and the first two letters of his last name. I personally know of eight professional photographers that are devoting their entire time to either portrait or commercial advertising, photography, who have been entirely trained by Mr. Noble and several of whom still retain their membership in the Weno club.

I have seen Mr. Noble leave his ranch and devote two and sometimes three days in guiding and helping to build camera equip-



"Walter E. Noble"

Donald J. Mayer, O.D., F.C.S.O.

ment for the photographic enthusiast who, because of the lack of finances had to build almost all of his equipment.

Charles Wooster, photographer in the Riverside County Sheriff's Office and member of the Weno club, has been doing professional photography twenty years, and he recently told me, "I wish I knew one-fourth as much photography as Mr. Noble."

Here on the Pacific Coast I am sure that there are anyway from 800 to a thousand amateur and professional photographers that know and love Mr. Noble and the wonderfully genial character that he is, giving his time unreservedly to all those interested in learning more of photography.

Now our Maestro is very ill and has been confined to his bed since the middle of June with heart trouble, and "if I were King" I would publish or have published one or both of those pictures which I know would greatly please many of your readers who have known Mr. Noble for years, and would act as a tribute to one of the grandest old men in photography that the West has known.

Respectively yours,

DONALD J. MAYER, O.D., F.C.S.O.

Camera Craft is glad to pay tribute to Mr. Noble's long and useful service to photography and wishes him a speedy recovery.—Ed.

What Is Your Photographic I. Q.?

Determine your Photographic I. Q. for this month with the True-False test.

Read the statements as given below and check as being either true or false. Compare your answers with those on page 549. Deduct 10% for each error. The perfect score is 100%; excellent rates 90%; very good 80%; good 70%; fair to bad, below 70%. Try it!

1. With winter a few months away, it is well to remember not to take a lens from a warm room into the winter cold because moisture will condense on the lens surface.

☐ True
☐ False

2. The terms stigmatic and anastigmatic when applied to a lens are synonymous.

☐ True
☐ False

3. A camera equipped with a lens having a universal focus is always in focus for near, as well as far, objects.

☐ True
☐ False

4. In taking pictures of room interiors with a miniature camera a lens with a focal length of 2.8 cm. is of decided advantage.

☐ True
☐ False

5. Copper developing tanks are unsuitable for holding photographic solutions be-

cause they cause chemical fog on the film.

☐ True
☐ False

6. Double weight papers do not require any longer washing than single weight papers.

☐ True
☐ False

7. A two-solution developer designates one in which only two chemicals are used.

☐ True
☐ False

8. Enlarging paper cannot be successfully used for contact printing.

☐ True
☐ False

9. The following names, without exception, represent outstanding pictorialists: Alexander Keighley, Edward J. Steichen, William Mortensen, Leonard Misonne, John M. Whitehead, F. J. Mortimer, and Julius Aschauer.

☐ True
☐ False

10. The distance between the nearest and most distant objects, which can both be sharply rendered in the picture formed by a lens, is understood to be the depth of field.

☐ True
☐ False

Club Notes

FORTHCOMING EXHIBITIONS

The Fourth Annual 100-Print Travel Salon of Pictorial Photography of the Photographic Society of America. Address Julian Hiatt, Secretary, 1776 Ohio Avenue, Long Beach, Calif. Closing date October 28, 1939. Entry fee \$1.00, limit four prints. First showing at Long Beach, California, January 1 to 31, 1940.

Third Rhode Island National Salon of Photography. Address The Salon Committee, The Camera Club of Rhode Island, 103 Westminster Street, Providence, Rhode Island. Closing date October 30, 1939. Entry fee, \$1.00, limit four prints. November 19 to 25, 1939.

Eighth Annual Minneapolis Salon of Photography. Address Chairman Salon Committee, Minneapolis Camera Club, 113 South Sixth Street, Minneapolis, Minn. Closing date November 4, 1939. Entry fee \$1.00, limit four prints. December 6, 1939 to January 7, 1940.

XIII International Christmas Salon Iris. Address Mr. E. Borrenbergen, 265 Dambruggestraat, Antwerp, Belgium. Closing date November 10, 1939. Entry fee \$1.00, limit four prints. December 23, 1939 to January 7, 1940.

Second Annual Southern California Photo Salon. Address E. R. Sensenbach, Suite 317 Bank of America Bldg., 110 West Broadway, Glendale, California. Closing date November 11, 1939. Entry fee \$1.00, limit four prints. December 1, 2 and 3, 1939.

First National Amateur Photographic Salon, sponsored by the Cultural Olympics of the University of Pennsylvania. Address Dr. Frederick C. Gruber, Director of the Cultural Olympics, 3446 Wanut Street, Philadelphia, Pa. Closing date November 13, 1939. Entry fee \$.50, limit four prints. December 2 to 18, 1939.

Springfield Salon of Photographic Art (And Pictorialists International). Address John Funaro, Director, 110 Rochelle St., Springfield, Mass. Closing date November 30, 1939. Entry fee \$1.00, limit four prints. January 3 to 31, 1940.

International Competition of Artistic Photographic Pictures 1939. Address C. J. Bucher, Ltd., Zurichstrasse 3/5, Lucerne, Switzerland. Closing date December 1, 1939. No entry fee. The results of the competition will be published in one of the first issues of "Camera" after closing date.

Twenty-third Annual International Photographic Salon of the Camera Pictorialists of Los Angeles. Address Larry Lewin, Secretary, Los Angeles Museum, Exposition Park, Los Angeles, Calif. Closing date December 1, 1939. Entry fee \$1.00. Los Angeles Museum January 1940, M. H. deYoung Museum, San Francisco, February 1940.

Second Western Pennsylvania Salon. Address W. C. Munhall, Greater Pittsburgh Photographic Society, Inc., 210 E. Park Way at Sandusky St., N. S., Pittsburgh, Pa. Closing date December 6, 1939. Entry fee \$1.00, limit four prints. January 10 to 31, 1940.

Springfield's Second International Salon of Photography. Sponsored by The George Walter Vincent Smith Art Gallery. Address Cordelia Sargent Pond, The George Walter Vincent Smith Art Gallery, Springfield, Mass. Closing date December 6, 1939. January 3-21, 1940.

Third Southern Salon (Second International). Address H. W. Newsome, Chairman, Salon Committee, Norfolk Photographic Club, care Norfolk Museum of Arts & Sciences, Norfolk, Virginia. Closing date December 12, 1939. Entry fee \$1.00, limit four prints. January 7 to 28, 1940.

Fifth Annual Des Moines International Salon of Photography. Address Walter Vitum, Salon Director, Y.M.C.A., Des Moines, Iowa. Closing date December 15, 1939. Entry fee \$1.00, limit four prints. January 1 to 22, 1940.

First Annual Boston International Salon of Nature Photography, 234 Berkeley Street, Boston, Mass. Closing date December 31, 1939. Entry fee \$1.00, limit four prints. February 1 to 15, 1940.

Second Valley of the Sun Photographic Salon. Address Odus Flinn, Chairman, 1314 E. McKinley, Phoenix, Arizona. Closing date January 1, 1940. Entry fee \$1.00, limit four prints. February 1 to 28, 1940.

Annual National Salon of Photography, under the auspices of the Yonkers Camera Club. Address Salon Committee, c/o Chairman Hubert L. Swapp, Y.M.C.A., Yonkers, New York. Closing date January 6, 1940. Entry fee \$1.00, limit four prints. January 16 to 31, 1940.

Seventh Wilmington International Salon of Photography. Address Miss Muriel E. Place, Secretary Salon Committee, P.O. Box 981, Wilmington, Delaware. Closing date January 12, 1940. Entry fee \$1.00, limit four prints. February 5 to 25, 1940.

Seventh National Collegiate Salon of Pictorial Photography, sponsored by the University of Wisconsin Camera Club. Address Jerome Saeman, Salon Chairman, University of Wisconsin Camera Club, Memorial Union, Madison, Wisc. Closing date January 12, 1940. Entry fee \$1.00, limit four prints. Open to the faculty and students of any institution of collegiate grade.

Fourth Virginia Photographic Salon, under the auspices of the Camera Club of Richmond, Inc. and the Virginia Museum of Fine Arts. Address Miss Marie D. Powell, Secretary Salon Committee, 1714 Park Avenue, Richmond, Virginia. Closing date January 23, 1940. Entry 25¢ per print with a minimum of \$1.00, no limit on the number of prints to be submitted. January 27 and 28, 1940.

Seventh International Salon of Photography of the Pictorial Photographers of America. Address Ira W. Martin, Salon Director, 10 E. 71st St., New York, N. Y. Closing date February 1, 1940. Entry fee \$1.00, limit four prints. March 6 to 29, 1940.

Second Annual Youngstown Camera Club Salon. Address Salon Manager, R. M. Eick-

meyer, 17 N. Champion St., Youngstown, Ohio. Closing date February 10, 1940. Entry fee \$1.00, limit four prints. February 18 to 28, 1940.

Fifth Annual National Salon of Pictorial Photography of the St. Petersburg Camera Club. Address Homer Agee, Salon Chairman, 95 Seventh St. South, St. Petersburg, Florida. Closing date February 15, 1940. Entry fee \$1.00, limit four prints. March 4 to 18, 1940.

The French 100-Print Travel Salon is now being booked for showings by the Photographic Society of America. Address applications to Dr. Paul E. Truesdell, Director, 45 Orange Road, Montclair, N. J.

The Arizona Pictorialists, of Phoenix, Ariz., announce that the First Southwestern Print Collection will shortly be exhibited on the Pacific Coast and that camera clubs who wish to show this exhibition should apply to Maurice Bradford, Box 2010, Phoenix, Ariz. A second collection of prints is now being gathered and will be ready for distribution about April 1940.

When visiting Canada, it would be well for photographers to remember that that

country is now at war and that promiscuous snapping of pictures, particularly at things connected with the military, are frowned upon. A Canadian correspondent forwarded us a clipping outlining the arrest of half a dozen amateur photographers for just this error. It is not quite so much of a joke when one considers that the photographers were detained 12 hours while the films were developed and examined. In times like these, when you see a picture of something connected with the army or navy, think twice and then go away and look for a nice landscape. This warning also applies to our own country and it would be well for photographers to keep away from army areas, so that by reasonably restraining themselves now, they may prevent needless restrictions, which might be laid down by exasperated authorities.

Cedric Wright will have a showing of his late work at the Stanford Art Gallery, Palo Alto, Calif., from Nov. 1st to 15th. Some of Mr. Wright's excellent photographs have appeared as prize winners in the Camera Craft Monthly Competitions—the show will certainly be well worth seeing.

Notes and Comments

The P & H Process was originally described in this magazine in a series of three articles beginning in March of this year. Since then many improvements in formulas and equipment have been made and the newly organized P & H Corporation, 7000 Romaine St., Hollywood, Calif., announces that all materials are now ready for the market. New equipment for the processing of 35mm. roll film may be had at the price of \$2.50, while similar equipment for 120 size film is priced at \$3.50. Improved developers have been worked out, incorporating a newly discovered hardening agent, and making use of one of the new chemical wetting agents to insure even absorption of the developer. It is no longer necessary to chill the developer as originally announced. It can now be used at normal temperatures thus eliminating a major inconvenience. An illustrated booklet describing the process may now be had free of charge by writing the above address, and a complete book describing the process and its application very thoroughly will be available in about 60 days, at a reasonable price.

Four new texture screens and an etching edge border mask have been introduced by the Agfa Ansco Corp., Binghamton, N.Y. The new screens will provide a professionally finished appearance to prints. 8x10 inches in size, the screens will be priced at \$2.50 each. The Border Mask, especially designed for use with the screens, will provide a 7½ x 9½ inch field, price is \$3.00. A special price on complete set of screens and masks is \$10.00.

Superpan Supreme now available in all popular sizes of roll film and film packs. Offering more than twice the speed of the Superpan film it replaces, Superpan Supreme also gives a finer grain and a better-balanced color sensitivity. Until a new carton is prepared, Superpan Supreme will be supplied in the old Superpan boxes, identified by an attached label or the imprinted word "Supreme."

Lightning Flash, the Universal Synchronizer, has been introduced by Cloud Products, 65 Columbia Square, San Francisco, Calif. This new flash synchronizer will fit any presetting blade shutter: Compur, Flinter, Diomatic, Kodamatic and Supermatic. It gives perfect synchronization, is easy to attach and will not damage the shutter. Price \$10.00. See it at your dealer's or write the above address for further details.

The DeJur-Ansco 5A Exposure Meter was increased in price, Oct. 11th, due to mechanical improvements. Formerly priced at \$10.50 with case, this model will now be offered at \$11.50, with case \$1.00 extra, making a total of \$12.50 for the complete unit.

Kathleen Dougan, famous portrait photographer, has opened a new studio at 4488 Reinhardt Drive, Oakland, Calif. Her many friends will join Camera Craft in wishing Kathleen Dougan success in her new studio.

"How to Use the G-E Exposure Meter for Printing and Enlarging" is the title of a new leaflet just published by the General Electric Co., Schenectady, N.Y. It gives complete details on using your G-E Meter as a photometer and includes a chart for calculating the exposure for different degrees of enlargement. Write the above address for your copy, ask for folder GED-801.

A news broadcast is being sponsored by Hirsch & Kaye, of San Francisco, Calif., daily except Sunday at 7:30 a.m. over KYA. Under the catchy name of "Start The Day With Hirsch & Kaye," the program will highlight the news in a five-minute period. Make a habit of tuning in each morning for the latest headlines in the news.

Abstract Photographs in full color, by Nicholas Haz, F.R.P.S., are being displayed at the Julien Levy Galleries, 15 East 57th St., New York City, from Oct. 17th to 30th. Photographers will find much of interest in this forward-looking type of photography. Mr. Haz will be present to explain the method of making photographs. The name of

the Haz-Sanders School, conducted by Mr. Haz, has been changed to the Nicholas Haz Master School of Photography, 30 Rockefeller Plaza, New York City.

A new Sacramento, Calif. optical store, with complete photographic department, will be opened by the Jenkel-Davidson Opt. Co., about Nov. 1st. The photographic department will offer camera enthusiasts complete service and will feature Zeiss, Eastman, and Leica cameras, as well as Bell & Howell and Eastman movie equipment. The new store will be located at 1021 K St. Mr. Ted Meyer, Jr., formerly with the San Francisco branch of the firm and experienced in photography, will be in charge of the camera department.

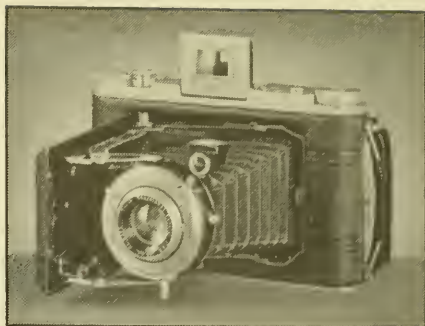
Super Speed 500, a new fine grain developer for which startling increases in emulsion speed are claimed, has been introduced by the Kemp Camera Supply Co., 923 No. Cole St., Hollywood, Calif. The manufacturers claim a Weston daylight rating of 500 for Superpan Press or Super XX and a rating of 125 for Panatomic or Finopan films. At the same time, the developer is said to give very fine grain and an even scale of gradation. It may be used full strength or in dilute form and a Kemp Devel-O-Guide, a dial type calculator, is included free with each 32 ounces. Price \$1.50 per 32 ounces. Write the above address for further details or see your dealer.

The Sistogun is a new "non-braking" back shutter synchronizer for 3½x4½ and 4x5 Speed Graphics, recently introduced by the Kalart Co., 915 Broadway, New York City. The Sistogun operates on an entirely new principle, developed by Ernest Sisto, Wide World Staff Cameraman. It is simple to install and may be used with any Kalart battery case and reflector. Price is \$12.00 and further details may be obtained from the above address.

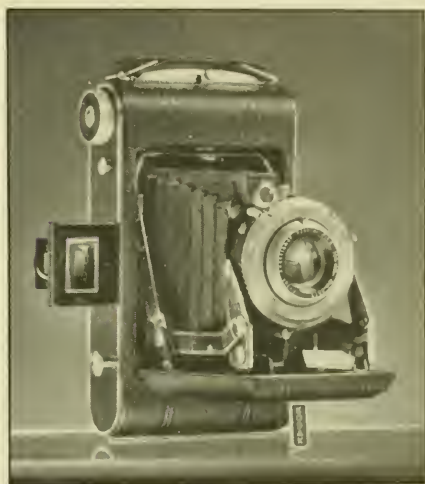
The Eastman Kodak Co., announces that following a policy established in the 1914 to 1918 period, when their prices were kept practically constant, they will make no increases in price during the present crisis unless rising costs make it absolutely necessary. They also are pleased to announce that due to company expansion the war will not endanger their sources of supply. Eastman plants in the United States are now supplying many of the products which were endangered by shortage during the last war.

The new Fabco Trimmer has been placed on the market, after extensive research had found ways of eliminating the disadvantages of old-fashioned trimmers. It has an automatic head clamp that grips the paper firmly, preventing creeping during cutting.

The blade remains in any position, held there by spring tension, eliminating injuries to the operator and spoilage. A blade stop, so fixed that the cut is arrested just before the end of the stroke, prevents oversize sheets from being torn and permits them to be trimmed perfectly in two or more cuts. Sturdily constructed of fine materials, the Fabco Trimmer is designed for long use. Three accessories for the trimmer, which increase its effectiveness, are also available. A graduated cut-off gauge for measuring multiple cuts; a margin gauge for squaring up uneven prints; and a width gauge for trimming prints to the same size. For further details



Kodak Monitor



Kodak Vigilant

write the Fabco Products Co., 1335 W. First St., Los Angeles, Calif.

Two new lines of Kodaks, The Monitors and The Vigilants, have been announced by the Eastman Kodak Co., of Rochester, N.Y., and will be ready for distribution in November 1939. The Kodak Monitors are offered in four new models, 2 taking 2½x3¼-inch pictures and two with the 2½x4¼-inch size, ranging in price from \$30.00 to \$48.50, depending on the lens and shutter equipment. Both models may be equipped with the 9-speed Kodak Supermatic Shutter and Kodak Anastigmat Special F4.5 lens. All models feature an automatic film-wind control and body shutter release. The new Kodak Vigilant Cameras are offered in eight new models, ranging in price from \$14.50 to \$42.50, depending on lens and shutter equipment. The new Supermatic Shutter and Kodak Special F4.5 lens are also available for these cameras, 4 models of which take pictures 2½x3¼ inches and 4 in the 2½x4¼-inch size.

The Natural Color Corp., 62 E. Lake St., Chicago, Ill., are offering brilliant color prints, 8x10 inches, from any size or type of transparency, for \$7.50. Additional prints for \$2.00 each. Prints are made by the well-

known Eastman wash-off imbibition process and are salon mounted. Interested dealers should write for discounts.

The New York Institute of Photography. 10 W. 33rd St., New York City, announces the addition of Helene Sanders, F.R.P.S., to its faculty. This famous woman photographer, whose work is known to every salon worker, is an authority on miniature photography and portraiture and students of the New York Institute of Photography will gain much from her experienced instruction. The New York Institute of Photography welcomes visitors to their studios where an exhibit of photographs, in black and white and in color, is continuously on display. A request to the above address will bring an illustrated booklet describing the facilities of the School.

T. S. Cawthorne, for the past 16 years associated with the Weston Electrical Instrument Corporation in the manufacturing and sales divisions, has resigned as a member of the Weston staff to establish himself as a manufacturers' representative in Detroit. Mr. Cawthorne will handle several lines in the electrical equipment field, including instruments manufactured by the Weston Company. He will make his headquarters at 312 Boulevard Building, Detroit, Michigan.

The Filmaek Laboratories, 843 S. Wabash Ave., Chicago, Ill., are offering 16mm. users and Road Show Men the same motion picture trailer service that was formerly only available in the 35mm. field. Using the latest in equipment and a well trained staff of experts, Filmaek will be able to supply every type of trailer, silent or sound. An informative 16mm. catalog is available upon request to the above address.

A new line of color toners has been announced by the Mansfield Photo Research Laboratories, 701 S. La Salle St., Chicago, Ill. All the toners are a single solution and the following colors are available: Blue, Green, Brown and Magenta. They are reported to work with equal efficiency on all types of papers. A wide variety of tones is possible with each color and combination toning will produce unusual color effects. A 32 ounce bottle will sell for \$1.25.

Harrison & Harrison, 8351 Santa Monica Blvd., Hollywood, Calif., manufacturers of high quality Duraline Filters have prepared an excellent booklet on the selection and use of filters, "The Mystery of Filters." Copies are available for only 25c.

"To Angelo . . ." began a sign that appeared in the window of Frank Tanham's photo shop, in New York City. The rest of the message was "we have removed the Omega Enlarger which you planned to take out of this window over the week-end. Our sincere apologies for disturbing your plans." It seems that a friend of the store overheard some sinister gentlemen planning to burglarize the window and to remove specifically the Omega Enlarger, used as the center of the display.

A new developing service for 35mm. film is offered by the Technifinish Laboratory, 113 Lexington Ave., Rochester, N. Y. For only 75c, your film will be developed in DK20 and 2½x3¾ inch prints supplied from each negative. Cartridges will be reloaded with Eastman Plus X for an additional

charge of 25c. Postpaid mailing bags and further details will be supplied upon request.

New leatherette covered Wesco Slide Files are being featured as the ideal Christmas gift by the Western Movie Supply Co., 254 Sutter St., San Francisco, Calif. Economically priced, these sturdily constructed and attractive finished slide files will hold 100 2x2 inch slides and include a numbered index on the cover. Available in four attractive colors: brown, blue, red and black, for only \$1.75. A double unit holding 200 slides is priced at \$3.95; a 300 slide unit with leather handle for \$6.95; and a 300 slide De Luxe Model, covered with genuine black or brown cowhide for \$10.00. See them at your dealer's or write the above address for further details.

The Flash King, Universal Model B, a new synchronizer that works perfectly on all types of shutters, including focal plane, has been introduced by the Western Photographic Mfg. Co., 418 W. 29th Ave., Spokane, Wash. It is said that the Flash King can be fully synchronized to any camera in sixty seconds by following a few simple instructions. The highly polished battery case and reflector present an attractive appearance that looks well on the most expensive cameras. Price is only \$7.50. See your dealer or write the above address for further details.

The Leigh Electric Solution Mixer, introduced by Leigh, Inc., 113 So. Sixth St., Minneapolis, Minn., makes mixing chemicals a quick and easy process. It dissolves developers and hypo in record time and hot water is unnecessary. It is available on a stand for \$8.75 or on a wall bracket for \$6.75. See your dealer or write the above address for details.

The Vokar Cameras, a new American product will shortly be placed on the market by the Electronic Products Mfg. Corp. of Ann Arbor, Mich. These cameras will have the highly popular 2¼x2¼ inch negative, 12 exposures on No. 120 roll film. Triple Anastigmat Vokar lenses and shutters of the dependable compur type will be used. A new feature will be the Varicoupled Diaphragm Control which will automatically set the diaphragm in relation to shutter speed. It is expected that the new Vokars will be offered in three models priced at \$15.00 and up, depending on the lens, equipment and finish. Connected with the new firm are two men well known in photographic circles and formerly connected with the manufacturers of the Argus cameras: Mr. V. A. Searles, who will be in charge of sales and advertising and Mr. William F. Carr, in charge of engineering, designs and optical research.

Making your own Christmas Cards is a simple process with the Photographic Xmas Greeting Card Production Outfits distributed by the Merit Photo Service, 29 Norwood Place, Bloomfield, N. J. These outfits provide 10 different Christmas Greetings and 8 different decorative silhouettes on either film or paper negatives. Complete directions are provided for combining these with your own best negatives to make your personal cards. Instructions are also included on how to make your personal signature negative. The outfits are offered at two prices. Paper negatives are provided with the \$1.00 outfit and film negatives with the \$2.00 kit,

which also includes 4 seasonable picture negatives. Complete details regarding the outfits are available from the above address.

Trans-Sharp, a new device for viewing negatives and transparencies has been introduced by R. P. Cargille, 118 Liberty St., New York City. Trans-Sharp consists of a light diffusing screen held firmly between two heavy cardboard frames. The negative or transparency is placed on the screen, which is held in front of a strong light source. Thus, the negative or transparency is viewed against a background of soft, diffused light that brings out all the detail and sparkle it contains. An efficient viewing device at a very economical price. Model D, for Dufaycolor, window size $3\frac{1}{2} \times 3\frac{1}{2}$ inches, 40c; Model K, for Kodachrome, window size $1\frac{1}{2} \times 1\frac{1}{2}$ inches, 25c.

The First Annual Mid-West Photographic Exposition and Camera Show, will be held at the Hotel Jefferson, St. Louis, Mo., from Nov. 9th to 12th, inclusive. Details may be had by writing the Hotel Jefferson.

A complete catalogue of Deardorff Cameras and Stands for Commercial, Studio and Illustrative work has just been published by L. F. Deardorff & Sons, 11 So. Des Plaines St., Chicago, Ill. These finely constructed cameras are furnished with extreme double swing Back and double swing Front, long square bellows, extra large lens board and Sliding Front Board. Their rigid construction and unique locking devices make them ideal for color work. The Deardorff Stands are also specifically constructed to fit the needs of the professional photographer. Write the above address for your copy of the catalogue.

Photrix "22" Enlarger, introduced by the Intercontinental Marketing Corp., 8 West 40th St., New York City, is constructed to meet the highest standards. It will take all negatives from $2\frac{1}{4} \times 2\frac{1}{4}$ inches to a single frame 35mm. Some of its special features are: Cool-working 6-volt illumination operating from house current on built-in transformer; pivoted lamphouse that tilts to correct distortion, turns horizontally for the projection of all film material; dustless, scratchless, all-metal negative holder; counter-balanced head, moves quickly and easily; double-condenser optical system and adjustable light source; two diffusion disks included for special effects. The Photrix "22" is priced at \$69.50, without lens.

A new special bargain catalogue has just been published by the Central Camera Co., 230 So. Wabash Ave., Chicago, Ill. 32 pages of up-to-the-minute bargains. Write for your free copy.

The Gevaert Co. of America, 423 W. 55th St., New York City, has acquired a large factory in Williamstown, Mass., where they will manufacture their well-known sensitized photographic products. Up to the present time, the American firm has been operating as distributors for the Belgian Company but with the new plant they expect to be supplying American manufactured products within a short time.

An Interscholastic Photographic Contest has been announced by the manufacturers of the Argus Cameras. Open to pictures taken with the Argus, the contest will award 8 cash prizes each month for six months

and a Grand Prize of \$50.00. Entry blanks are available from your local Argus dealer.

Henry Herbert, 483 Fifth Ave., New York City, has just published a new price list of interest to every photographer. Copies are available, free of charge, upon request to the above address.

A Focusing Spotlight, for use with Speed Graphic Cameras and Deluxe C Speedguns offers a valuable accessory for night flash photography. When light is insufficient to permit the use of range finder or ground glass viewing screen, the Spotlight may be plugged into the Speedgun, drawing current from its batteries, and it supplies illumination for focusing. Write the Folmer Graflex Corp., Rochester, N. Y., for further details.

Solar Jr., a new miniature enlarger, an addition to the Solar line of precision enlargers, has been announced by Burke & James, Inc., 223 W. Madison St., Chicago, Ill. The Solar Jr. will be offered at the popular price of \$39.50, including a 2 inch, F:4.5 Wollensack enlarging lens.

Answers to What is Your Photographic I. Q.?

1. False. Taking a lens out into the winter cold will not affect it; however, bringing it back into a warm room will cause condensation.
2. True. Stigmatic and anastigmatic have exactly the same meaning and refer to highly corrected lenses. On the other hand, however, astigmatic means "not stigmatic" and is used to designate a lens in which the aberration of astigmatism is present.
3. False. At best a lens with a universal focus is nothing more than a lens set at a fixed compromise focus, this focus being for a distance at which most "average" pictures are taken.
4. True. A lens with a focal length of 2.8 cm. is classified as a wide angle lens. Its obvious advantage is in the wide view or field it covers at short distances.
5. True. Copper developing tanks should not be used as containers for developing solutions. Copper has a readiness to combine with the developing chemicals and form compounds which will produce fog on the film emulsion.
6. False. In view of the fact that double weight papers have greater absorption properties it can be expected that it will take longer for them to give up their hypo contents.
7. False. A two solution developer is nothing more than a one-solution developer split into two parts; one contains the carbonate and bromide, the other the developing agent and preservative so that the developer will oxidize less readily and consequently keep well.
8. False. Enlarging paper used with proper precaution may be used quite satisfactorily in place of contact paper.
9. True. Yes, without exception, all the names as given represent outstanding pictorialists.
10. True. Depth of field is dependent upon the distance of objects from the camera, the relative lens aperture as well as the focal length of the lens.

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◆Leica G Summar F:2, new, with case, \$160.00. Address N. W. C., care Camera Craft, 425 Bush St., San Francisco, Calif.

◆4x5 R. B. Tele Graflex 12 in. focal capacity, 4.5 Tessar 7½ in. \$65.00. Also 4x5 R. B. Auto Graflex 18 in. focal capacity. 13 in. Zeiss F:8, \$65.00. 3A Kodak 6.3, \$15.00. 6025 Wanda Ave., St. Louis, Mo.

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"Stephen Tyng"

Julian Smith, F.R.P.S.

The Work Of Dr. Julian Smith, F.R.P.S.

George Allen Young



"Self-Portrait"

Julian Smith, F.R.P.S.

LET us agree at the outset that Dr. Smith's fine pictures are fully able to speak for themselves. Eminent critics have placed this work at the very forefront of photographic achievement, so there is little that we could say here that would add to or detract from its undoubted excellence. The main purpose of this article therefore, will not be appreciation or criticism, but rather an effort to show the reader some of the lessons which may be learned from a study of really fine pictures with the hope that he will find some suggestions which he can apply to his own work.

The pictures shown were selected from a one man show of about 140 prints, and with one or two exceptions seem to us to be representative of Dr. Smith at his best. Smaller cuts are used so that a reasonably adequate cross section could be presented in the limited space available.

Dr. Smith is a retired surgeon resident in Melbourne, Australia, who has been an active exhibitor for 15 or 20 years. In a letter, he has this to say of his early experiences in photography: "I think I was born with a love of pictures and was content, for hours at a time as a child, with illustrated volumes; but I always turned, I remember, to attempts at copying them and to making others. Thus, early it was clear that mine was a creative instinct and when cameras came into my possession it was always



"Farewell"

Julian Smith, F.R.P.S.

the *picture* resulting other than the *record* which directed me in my efforts. But I was groping until I met John Eaton the landscape worker. He had definite ideas about pictorialism; I used to arrange excursions with him hunting after landscape, but so often had to break them for emergency professional work that I abandoned landscape and gradually came around to portraiture as being always at hand and available also at night time. As a fact, I have always been more interested in portraiture than landscape and on all occasions the landscape negatives have been put aside because of the lure to me of the human element.

"I turned mainly then to the study of reproductions of all known portraits from all sources and might easily have become a collector of prints and been satisfied. But I'm not a collector by instinct at all and just wished to go on making pictures.

"At the time when this seriously began 15 to 20 years ago there was very little literature about photographic portraiture for amateurs and practically none about artificial lighting, so that all that I now know, if its worth naming, is self-taught. The designing of lamps, backgrounds, etc., proved to be very interesting to me.

"I explored many pathways with soft focus; flash and stunt lightings; bastard and false printings and so on; just to come around to the very simple uncomplicated lightings; to relying on the medium in its simplest



"Heep"

Julian Smith, F.R.P.S.

form of good straight photography, in which anyone who follows instructions ought to be proficient."

This whole quotation, and the last paragraph in particular points to the one general proposition which we wish to lay down, and intend to explore in detail as this article progresses. It has been stated again and again and has to do with the very human desire to find a short-cut to success. In photography it takes the form of a continual search for the *secrets*, the possession of which creates superlative photographers overnight. We look for the *secrets* of composition, the *secrets* of lighting, the *secret* formula; secrets secrets and more secrets. When we stop to think we know that such secrets do not exist, but "hope springs eternal" and the first thing we know much more valuable time and effort is wasted in another fruitless search.

We are quite certain that Dr. Smith knows of no secrets. What he knows is substantially what all of us know, but he has made this knowledge an intimate part of himself. He has worked with and practiced this knowledge, persistently and observantly. His is a deeper understanding encompassing all of the subtle and infinitely varied applications of a given bit of picture-building procedure. Let us look at some of Dr. Smith's procedures in detail. For years he used a 4 x 5 inch film size but now works with 5 x 7 inch material. Lenses range from 10 to 30 inch focus, with a 15 inch F:3 lens of the Petzval type being used in a majority of cases.

Lighting

In a letter Dr. Smith writes as follows: "I worked in my ordinary house rooms at first but realized that a place should always be ready and now have constructed a small studio 12 x 30 feet (which isn't really large enough) with lamps running on overhead galleries. They are so placed as to conform to the principle of a *main* modeling side light and a broad *front* light to fill in the shadows. The arranged *balance* between these two gives all the effects; with the former used alone at one end and the latter alone at the other end of varieties in lighting. The background, I find, is better lighted independently."

Here, then, we are sure all will agree, is a very simple lighting system, and yet it is plain that Dr. Smith can achieve virtually every lighting effect that could be desired with it. The important thing, of course, is the *balance* between the two lights. The final careful adjustment of this balance must always depend upon the judgment of the operator. No lighting diagram can ever give more than approximate positions, for no two subjects are ever exactly the same. For strong contrasty effects such as are seen in Figures 2, 6, 11 and 12 the main modeling light is placed close while the broad frontal light is placed far back or perhaps eliminated altogether in extreme cases. For soft, gently modulated lightings such as are seen in Figures 13 and 15 the broad front light plays the principal part, while the main modeling light is placed at a greater distance, or not used at all when the maximum effect is desired. Examples of a more even balance between the two lights are found in Figures 1, 4, 9 and "*The Conversation*."

Posing

The pose performs two very important functions. It sets the emotional quality of the picture. That is it tells the story, or depicts the character of



"Stuart Smith, Esq."
Julian Smith, F.R.P.S.
Figure 1



"F. C. Tilney"
Julian Smith, F.R.P.S.
Figure 2



"Harold Cazneaux"
Julian Smith, F.R.P.S.
Figure 3



"Professor Fraser"
Julian Smith, F.R.P.S.
Figure 4

the sitter. It also is the major factor in determining the pattern, the balance between lights and darks, in short the composition of the finished picture. It is plain therefore that pose must be looked upon both as emotion and as pattern, and the perfect pose is one which combines these two qualities most effectively.

Pose as emotion, therefore, means that the pose must be derived from the character of the sitter, the story to be told, or the emotion to be expressed. The type of picture will determine which of these phrases will best express this particular function of pose. We find splendid examples of all three types in the pictures before us. The very forceful arrested action pose in Figure 2, for example, helps greatly to bring out the strong, positive personality of the subject. In like manner the very quiescent pose of Figure 1, fits the mellowed personality of this truly fascinating character. Observe in Figure 4 how the inclusion of such a seemingly inconsequential thing as the bit of chalk instantly places the subject in relation to his profession. How the informality of the hand-in-pocket pose tells us that here is no pompous pedagogue, but a warm, human personality. With no other evidence than this picture we feel positive that here is a man whom students love and admire. For examples of pose as an aid to story-telling or the expression of an idea, observe Figures 5, 10, 12 and 14. In Figure 5 we don't need the title to tell us that a interestingly confidential bit of gossip is about to be divulged. The hand-to-nose gesture here is tremendously effective, and delightfully humorous. The flamboyant attitude in Figure 10 ticks off this Dickens character to perfection, while the pose in Figure 12 is likewise very expressive of the character shown. In Figure 14 the story is beautifully told by the coquettish attitude assumed by the model.

We have several exceedingly fine examples of pose in its more emotional aspects. "*Farewell*" is magnificent. The emotion here is so true and real that the most indifferent observer must surely be impressed by the emotional impact of this picture. The quiet dignity of the pose in Figure 16 tells us much of the lofty emotions engendered by fine music, while the inclusion of the violin suggests the musical theme. One can surely hear fine music while looking at this picture. A less concrete emotional quality is found in Figure 13. Here we experience the thrilling response to the very beautiful, which is perhaps one of the most uplifting of all emotional reactions. A simple pose is combined with a wonderfully harmonious short scale of tones, to produce a picture which is indeed a poem.

Expression

The excellence of these pictures is obviously not built on pose alone but is the result of the harmonious coordination of all factors involved. The expression on the face of the model is, of course of major importance and is perhaps the most subtle and illusive of all things with which the photographer has to deal. The photographer must, of course, learn by experience to recognize the most effective expression when he sees it, and to act instantly to capture its fleeting essence.

The obtaining of a desired expression is of necessity a cooperative effort between model and photographer. By suggestion of every sort the photographer must get the model into the necessary mood so that the expression will be natural and believable—not simply a grimace. Dr. Smith



"Entre Nous"
Julian Smith, F.R.P.S.
Figure 5



"Twins"
Julian Smith, F.R.P.S.
Figure 6



"Entr' Acté"
Julian Smith, F.R.P.S.
Figure 7



"I Doubt It"
Julian Smith, F.R.P.S.
Figure 8

uses the phrase "talk him into it" in speaking of his handling of a model. In a letter he writes: "A worthwhile sitting runs into one and one half hours and results in a dozen to 16 negatives. This feels equal to a good day's hard work for me and sometimes for the sitter too. I can never make a success without getting worked up, because much of one's energy must needs be given to the sitter and the approach must vary infinitely. Perhaps years of handling patients helps me, but the sitter invariably admits to a very interesting evening."

There is a widespread idea that the way to get good expressions is to hire a competent actor, who will then turn on whatever expression may be desired at your command. We know of no high ranking photographer who agrees with this theory. Dr. Smith has stated that he never uses actors or professional models because their actions and expressions are too artificial. What the photographer wants is naturalness above everything else, and if the testimony of the finest photographers is to be believed this is best obtained from an amateur model who is susceptible to direction. Notable examples of fine expression are to be found in "*Farewell*," "*The Conversation*" and in Figures 2, 5, 6, 8, 9 and 16.

Costume

Costume performs two very important functions. First it helps to complete the telling of the story, or the depicting of the character. Second it is very important in that it permits the photographer to exert control over the black and white pattern of his picture. By proper adjustment of costume a pleasing balance between lights and darks is achieved. Dr. Smith writes: "I soon realized that balance of lights and darks was dependent upon correct color of clothing and gradually built up a collection of 'props' which proved to be of great help."

It is interesting to note that Dr. Smith and William Mortensen have separately arrived at very similar conclusions concerning the proper treatment of costume. These are that the costume should be suggested rather than executed in detail. That costume in this sense is best created by a collection of cloth, coats, smocks, etc., which may not look like much to the eye, but which photograph in the desired values of black and white. In short, one must learn to see costume as it will photograph, not as it appears to the eye.

Hands

The treatment of hands is, of course, a part of posing but we choose to speak of them separately here because very few photographers make skillful use of the hands and because Dr. Smith makes better use of them than any photographer that we know of. The hands as would be expected also perform two primary functions. They are an extremely expressive element and can add a great deal to the effectiveness of a picture. They are likewise of great help in completing a composition in satisfactory fashion. Of the twenty odd pictures which are shown with this article only two do not make remarkably effective use of the hands, both as an aid to expression and to composition. Imagine these pictures with the hands eliminated and see how greatly they would be weakened. Here then, it seems to us, is a thoroughly convincing demonstration of the vast opportunities which proper use of the hands offer to every photographer.



F.A.L. "Is not the truth the truth?"
Julian Smith, F.R.P.S.
Figure 9



"Dick Swiveller"
Julian Smith, F.R.P.S.
"Figure 10"



"Micawber"
Julian Smith, F.R.P.S.
Figure 11



"Shylock"
Julian Smith, F.R.P.S.
Figure 12

No photographer can consider himself a mature worker in figure characterization until he has mastered this admittedly difficult aspect of posing. A very careful study of the ways in which Dr. Smith uses the hands and of the various aspects in which they appear to advantage will provide the reader with a wealth of the most valuable sort of information.

Composition

We have referred indirectly to composition in speaking of pose and costume, and only wish to make one or two additional points here. If the reader will recall the great majority of amateur portrait work, we feel sure that he will agree (particularly with these fine examples before him) that a very common weakness is the showing of a large head very inadequately supported by a relatively small amount of body, which is grudgingly allowed to remain in the picture space. Observe Dr. Smith's treatment. He seldom shows a head alone, but builds it up by the use of arms, hands, etc. When he does show just a head, as in Figures 1 and 8 he leaves a generous portion of body which acts as a firm base, and further serves to get the head up in the picture space as good spacing demands. Study the relation of head to body in these pictures; notice the size of the head in relation to the picture space; notice that the eyes are placed well up. Compare these pictures, where the composition is absolutely fine in every case, to your own work and try to soak up the fine feeling of balance that is so beautifully evident here.

The four panels of small cuts are grouped to show the four main divisions of Dr. Smith's work. First we see what might be called straight portraiture in which the character of the subject is the dominant theme.

Next a group in which humor predominates and the subject is used simply as a model to convey the humorous suggestion. Success here turns principally upon a finely turned expression, beautifully caught. Figures 5, 6 and 8 are outstanding in this regard.

Third are a group of characters from fiction, particularly Shakespeare and Dickens, in which our feelings for these characters are brought to life in wonderful fashion. Figure 9 in particular is superb.

And fourth a group of portraits of women. It has been written elsewhere that Dr. Smith is less happy in working with women than with men. There may be some truth in this since a majority of his finest things are of masculine subjects. We doubt, however, if his reputation would be noticeably reduced if he had shown only his feminine subjects. He is at his best with women when using them to express the less concrete emotions. "*Farewell*" for example is surely among his finest things, and Figures 13 and 16 rank very high indeed. If he has a weakness here it is in the handling of costume. The draping in Figure 15 seems overdone so that the figure appears swathed in too much material. The costume in "*The Conversation*" appears a bit jumpy but perhaps this is chiefly due to the old fashion style of the garments used.

If we were called upon to express a preference between these four groups we would perhaps lean toward the first two. Figure 2 is for us one of the finest photographic portraits we have ever seen, while Figures 1 and 4 are almost equally fascinating. Figures 5 and 8 are so delightfully entertaining that one could chuckle over them forever it would seem. Figure 7 goes a bit beyond the humorous, and perhaps suggests something of the



"Tone Poem"
Julian Smith, F.R.P.S.
Figure 13



"The Mink"
Julian Smith, F.R.P.S.
Figure 14



"Repose"
Julian Smith, F.R.P.S.
Figure 15



"The Master Plays"
Julian Smith, F.R.P.S.
Figure 16



"The Conversation"

Julian Smith, F.R.P.S.

subtle possibilities inherent in a finely caught expression. For us at least this face, in spite of its clown make-up, shows something of the wisdom and insight into human nature which the entertainer gains as reward for his efforts.

Dr. Smith has also done some fine work in the nude, which is not represented here because of space limitations and because it was thought that this article could be more helpful if it were confined to portraiture.

Photos On All Fours

Bob Wallace

THE most difficult part of animal photography comes in the posing procedure. Animals move frequently and you have to be able to keep them in focus. For that reason I always used a Graflex. It's absolutely necessary to have some type of reflex camera. Aside from that, the only requisite is patience. You have to like animals, and you have to want to get good pictures. It's no good just to try to get a job over with in a hurry. That's one thing that simply can't be done.

You'll have more trouble with the owner than with the pet. He will want to take charge and give commands. In no time at all, under such circumstances, the pet will be cowed, and useless as a subject. At this point you might as well quit for the day. Often the master of the animal will start whistling and clucking to maintain the pet's attention, and by the time you're half ready the animal is used to any kind of noise, and wouldn't pay attention to an earthquake. A good formula for insuring easy posing is for the photographer to grab the owner by the throat and scream, "Shut up! I'm in charge here, see?" It's impractical, of course, but with experience a photographer learns how to obtain nearly the same effect by means of polite firmness before the posing begins.

A dog is more at home and will assume a more natural pose when he is on the ground than when he is on a table or a box, because he can get a grip on the dirt with his toes. As for lighting, that has to be varied to suit the subject. The only thing I try for in the way of facial expression is a highlight in the eyes. If the subject is a terrier or some other dog with erect ears, the picture which picks up that feature is the best picture. A general knowledge of the best points of various breeds of animals helps the photographer to know what to strive for in a good picture. Naturally, you want the important points to show up well in the photograph. But the main thing is the alert look; and since a domesticated animal stops responding to noises very quickly, you only have three or four chances.

When you want to place an untrained pet in a certain pose, you have to fool him into it. That's the whole trick. The way I always did it was to



"Lord Bobs"

Bob Wallace

Figure 1

place the dog or cat approximately where I wanted him; then I'd go about my work smoothly and quietly, and finally I'd make some small noise—usually a low whistle—to arouse response and attention. That's one way of gaining that very desirable look of alertness.

The picture entitled "Lord Bobs" (Figure 1) was taken as a pet picture and was also used commercially. It has been shown many times in salons and is the type of pet picture most easy to take and most likely to be a money maker for the photographer. A good price can usually be had from the owner. The subject also gives it quite a few sales possibilities with various magazines, commercial pet food manufacturers, roto pages and other media.

I think "Darkie" (Figure 2) is one of the best dog pictures I ever made. It was taken for commercial use, yet was not retouched at all. The picture shows that a lot of trimming and doctoring is not necessary if a good dog is put down, properly groomed and well handled. Many owners will come to you with their dogs all out of coat or poorly groomed and expect you to produce a good picture. Don't try it. If they want a good picture make them give you a good animal in good condition. There will be enough troubles even then.

Photographs of trained dogs and cats which are used for advertising purposes in breeding journals are a different proposition from pet pictures. The full-figure picture is in demand. Ordinarily the animal poses easily



"Darkie"

Bob Wallace

Figure 2



"Sir Duke"

Bob Wallace

Figure 3. Example of excessive retouching which is often required on commercial photographs of show dogs.

and without much help. Owners invariably want the animal's faults hidden, and it is sometimes hard to arrange a pose that will conceal these faults. If it's impossible, almost any owner will tell you to go ahead and retouch. Sometimes I have been able to persuade people to let me show slight faults, for instance, of the animal's coat, and advertise the resulting photograph as unretouched. That sort of picture, clearly not tampered with, has a good deal of value, I think, because almost everyone who reads the advertisements knows that a great percentage of the pictures are touched up.

Figure 3 shows a type of picture I never liked to make. It was made for advertising purposes, of course. Portrait photographers who complain about their sitters aversion to a true likeness should try their hand at this game. Owners often demand a degree of retouching that robs a picture of all its life-like qualities. Notice the unnaturally pointed ears in Figure 3 and how the picture looks more like a cut-out than an actual photograph. Very few show dogs really look like their commercial photos.

In photographing show dogs, you can't be stingy with film. Two or three negatives won't do. Once, in finishing a picture of a Great Dane to the owner's satisfaction, I had to use the combined product of five negatives and much blowing up, reducing, pasting and retouching. I'm not proud of the picture, except as a mechanical job; it's as though I'd made an automobile out of a locomotive, a bedspring and two hairpins.



"Lotus Fore"

Figure 4

Bob Wallace "Lotus Aft"



Figure 5

Bob Wallace

Incidentally, to mention once again the commercial side of animal photography, I feel qualified to speak impartially of it as a career because I made it my career for three years, and now I'm doing another kind of work. With the proceeds from my pictures of animals I was able to buy a house and to make the contacts that set me up in an entirely different line of photography. Making pictures of animals is real fun for someone who likes them; but there are drawbacks to the constant use of animals as subjects, and the work is certainly limited in variety. So I don't think it would be entirely wise to discuss animal photography as a career; instead I'll try to put down the most valuable hints about it that I can think of, in an attempt to help any photographers who have a hunch they might like to go into the field in search of a hobby.

But first I'll discuss the market for pictures of animals, since many photographers have to pay their way by making sales even when they are indulging in a hobby. The best market for pictures of dogs and cats and other pets is with the owners themselves. There is plenty of work to be had in photographing trained show animals; but here you'll run into plenty of trouble with hard-to-please owners. Photographing show animals is all right as a way of making a living if you keep your prices high enough to cover all the grief you run into. Since most of the show-animal pictures are for advertising purposes, and as this type of advertising is rigidly standardized, the field offers very little opportunity for originality. The real market for good animal pictures is among the owners of pets, not show animals. These owners are hard to deal with, too, because almost every one of them thinks he is the only person in the world who can get his animal to pose for a picture. The magazine market for animal pictures is limited. *Coronet* and a few other magazines occasionally do buy good original photographs. As for salons, whether animal pictures place well depends

on the judges. If you know the preferences and prejudices of the judges you can pose the types they like. But some people are set against animals as photographic subjects, because they feel that human emotion and sentimentality is too likely to influence the judging of such an entry on its merits. Others don't let that bother them, and go ahead and select the most appealing picture. One year I sent the same selection of pictures to ten different salons, and no single judging committee duplicated the choices of any other salon. The next year, each salon, with different judges, would probably have picked a different type of picture. All in all, the most dependable market, as far as unchanging taste is concerned, is that of the pet owners. They'll allow you a good deal of freedom in posing the animal, and will respond gratefully to a sympathetic picture. I'll go into the subject of wild animals later; but in summarizing the markets for pictures of domestic animals, I would just like to give a word of advice; if you like animals, it's all right to go into this field as a hobby; but don't figure on getting rich.

All the pictures I look upon as my favorites are those I took in circuses, zoos and rodeos. Perhaps the two best known of these pictures of "wild" life are those named "Lotus Fore" and "Lotus Aft." (Figures 4 and 5.) These hippopotamus portraits were used, respectively, as the frontispiece and the end-page of *U. S. Camera* 1937. Before this they had been printed in *Life*, and had attracted the attention of the management of the Al G. Barnes-Sells Floto circus. These two pictures, one a front view and the other a rear view of a hippopotamus, were taken at four-year intervals. The head photograph had been in my file a long time before I used it. In making up a booklet of pictures to send East, I decided to use it for the front cover, and went out to get "Lotus Aft" for the back cover. When *Life* printed the pictures, I was hired to produce illustrations for the publicity department of the Barnes show. That circus job I still look upon as a perfect occupation. I just traveled with the circus for two weeks at the beginning of the season, meeting all the really interesting show people through my picture-taking job. The animals were exciting, too, and I took more pictures of them than of the human performers.

Not everybody can get the freedom of a menagerie tent as completely as I did, but by moseying around the watering troughs and the tent site on the first morning of the circus' arrival a photographer can make worthwhile pictures and strike up a few acquaintances among show folk, eventually getting on an intimate footing, after which he can ask for favors. That's the way I managed to get near the animals before the circus job turned up.

Elephants are wonderful picture material because they are intelligent, mischievous, hard-working, and possess many human traits which they express clearly. Since they aren't caged and are rarely malicious, their many activities are easy to catch without the worries attached to photographing some of the other circus animals. Outdoors, a Graflex is probably the best equipment; for taking pictures of the animals by flashlight during the indoor show, I used a Graphic.

Posed photographs of animals doing their tricks on pedestals aren't much use except for advertising the show. But lions or tigers posing on a pedestal are good subjects for close-ups (Figure 6). When an animal is posing, ready to perform, he is under complete control, and you can just walk right up and shove the camera under his nose. You can arrange



"Olga"

Bob Wallace

Figure 6

to have the animal far enough away from the arena bars in back of him so that they will be out of focus, if you don't want them in the picture. I've never had a bad reaction from a flash bulb, even at the closest quarters. A trained animal under control is no worry for a photographer. If you go into an arena, however, even with the trainer—and you always will be with the trainer—it's best to take a pick-handle. When you're in there, move slowly and keep out of the way. When you come in, the animals start looking for a way out. If you stand back against the wall or the bars, he'll be pacing along the outer edge of the cage trying to get out, and he doesn't want you stopping him. That's why you have to stay near the center of the arena.

Neither posed photographs nor close-ups are practical with ordinary untrained cage stock in either a circus or a zoo. Trying a close-up of a caged animal isn't much use; he might not jump, but he'll be as scared as the photographer is, and he'll back away, snarling. Even trained animals do that when their trainer isn't working with them, or hasn't got complete control of them. The flash doesn't bother cage stock, either. People and noises are what get on their nerves.

Probably the most interesting experience I've had in photographing circus animals came in the middle of September, this year, when I was asked to do a series of photographs of Gargantua, the giant ape, for the Ringling Brothers-Barnum and Bailey Circus. (Figures 7 and 8). The circus people told me they were the best pictures ever made of him, and that

pleased me a great deal because he is really a very tough guy to photograph. Before I describe my experience with Gargantua, let me quote the impressive words of the Los Angeles Evening Herald-Express on the subject: "Gargantua weighs between 600 and 700 pounds, is five feet and six inches tall when he stands up and has a nine-foot spread of his arms—arms which are always ready to grasp and crush any living thing that comes within their reach." Gargantua has a very mean disposition, as have many photographers' models, but the gorilla tries to do more to express his meanness.

Although ordinarily there is nobody near enough for Gargantua to reach because his cage is surrounded by glass (to protect him from disease germs, not to protect spectators from him), I had the unpleasant privilege of getting right up to the bars of the small cage which he stays in when the larger one is being cleaned. I just put my camera up to the bars and waited until he got where I wanted him. Most of the time he wasn't where I wanted him but up at the bars trying to reach me. The first time he charged the bars I thought it was all over with me, but after a few times I got used to it and began to get better pictures before jumping out of the way. He is a scheming animal, always trying to figure out ways to entice you within reach. He is amazingly quick, but luckily I managed to think and move just a bit faster every time. Once he took a short piece of garden hose which was in his cage and extended it through the bars, hoping I'd take hold of the other end. I was glad I didn't when I saw him suddenly snatch it into the cage with a swiftness you wouldn't think possible. He thought I had hold of that hose. Personally, I don't think it was a very smart trick, because if I had been holding it he would have had to pull an awful lot of iron bars out of me before he could do much with me. He played another trick with several other lengths of garden hose. He could shoot them with tremendous force from between his fingers, as though they were just little marbles. They hit terribly hard, believe me, but by luck none of them got my camera.

I spent an hour altogether, in three sessions, trying to get some good shots. The hardest thing was to get Gargantua to stand up. The trainer managed it by tying some fruit to the ceiling of the big cage, and then letting the ape into it. But he went for the fruit so fast that I had only a moment to hop inside and shoot before he'd finished his meal. And of course his back was to me. The trainer helped me yell, but all the attention we got was one disdainful look over his shoulder, a look which clearly said, "You fellows are just plain nuts." But one disdainful look in a photograph of Gargantua is just about all you need for an effective series of pictures.

In zoos there are plenty of fine subjects, Chimpanzees (Figure 9) are wonderful for character studies. They are constantly doing funny things, and are usually very friendly. But they're full of mischief, and it's not a good idea to leave anything around unwatched because they might decide to take an interesting looking camera apart. Snakes are also good subjects, but they have to be handled with care. Very few of them are poisonous, but they can be very easily injured or frightened; and a 20-foot python with a bad disposition gives a very bad bite, not unlike a dog's. But he'd rather crush you. Lions, tigers and leopards really have more possibilities than a snake. The photograph of the lion reproduced here (Figure 10) was taken in the back lot jungle at Zoopark, Los Angeles. The snarl was obtained



"Gargantua"

Figure 7



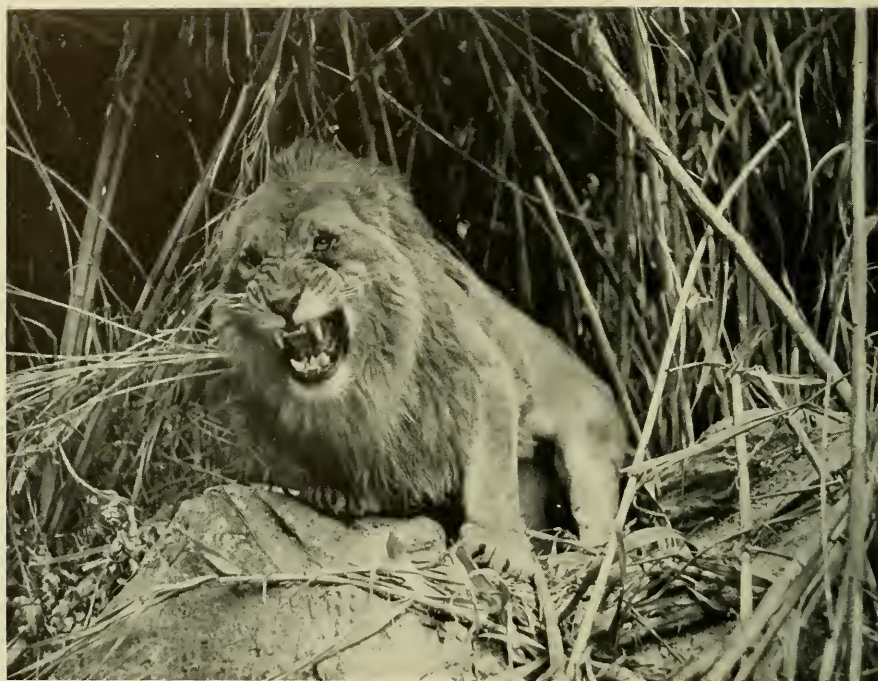
Bob Wallace

Figure 8

by backing him into a corner where he could not retreat, and then crowding him a bit. For those readers who might care to take a try at a similar shot, I might say that too much crowding won't work; when you're as much as a foot too close, the lion will get desperate and "bounce" or charge.

In most zoos the keeper will tell you which animals are tame and which ones will let you stick a camera through the bars and shoot at will. Naturally, photographers can make friends with a keeper by taking an occasional picture of him at work with his charges. After you present him with a few prints, a good natured keeper will grant favors he might not otherwise consider. The zoo people really like folks to have fun with their animals, and some of them are as curious about a photographer's work as the photographer is concerning the animals.

Some zoos have a jungle in back of the cages, and photographs of the big cats can be made in natural settings. A keeper with whom I was on friendly terms several times let me get into the jungle, and then turned the animals loose to roam around. Good candid shots are easy in that kind of situation. You can herd the cats around and get pretty much what you want. You can even get a semi-posed shot by walking a lion up on a rock where he simply has to pose. The average photographer can't get into one of these artificial jungles any time he wants to, but there are a number of zoos which have pits in front of the cages; with a tele-photo lens, good pictures are plentiful from this point. If you're choosy about backgrounds very often if you wait around long enough you'll be able to eliminate the bars from the picture and get some foliage or a blank white wall for a backing.



"Lion"

Bob Wallace

Figure 10

If you like a little excitement in your work, bucking horses and steers certainly make interesting photographic material. The best place in a rodeo for good bucking pictures is about a hundred feet in front of the chute out of which the performers ride into the arena. I've tried it and got some good shots. The camera gets good angles when it's right near the ground; another reason for keeping the camera near the ground is to make the bucking horse appear a lot higher off the ground than he really is. In many rodeo pictures the background contains a good deal of confusion of detail. It's hard, but it's possible, to get pictures in which the rider and horse are silhouetted against the sky. It's necessary to shoot when the horse is not right opposite the grandstand, but is out in the open. The position right outside the chute is good, true, but it also happens to be the most dangerous place in the arena, so a little advice is in order. You'll have your hands full, in this kind of picture-taking, trying to operate your camera at just the right split-second to get the best action, and at the same time trying to figure out which way the horse is going to go so that you can go the other way. If it's a steer, you'll have to spot the closest fence and be prepared to climb it. And if you don't make it to the fence and the steer has you out in the open, all you can do is fall on the ground, face down. A steer has a hard time goring a man who hugs the ground; all he does is snort and stamp around a bit, and someone can drive him away before much hurt is done.



"Chimpanzee"

Bob Wallace

Figure 9

The main thing to remember when you are getting ready to take a picture of any animal—tame or wild—is: *Don't get excited*. As soon as you start moving fast or making a lot of noise your subject will get scared. Then, if it's a pet you're photographing, there goes your picture. If it's a Bengal tiger—well, just *don't* get excited.

Synchro-Flash

Rex Hardy, Jr.

YOU know all about the fast emulsions the film makers are now providing for photographers; you probably take advantage of the improved developing formulae now available; you may have a flash synchronizer of some sort, but have you learned to combine these developments to the betterment of your pictures? Have you modified your technique to take advantage of the tremendous technical strides recently made in photography? For instance, the chances are you are thoroughly familiar with the one-flash-on-the-camera way of taking news pictures. But did you know that most important commercial photographers rely on flash bulbs for the illumination of his illustrative pictures—both black and white and color? To obtain the depth of focus and all-over sharpness and brilliancy demanded by the magazines, these men—Steichen, Bruehl, Muray, and the others who make the fashion shots and magazine covers we admire—find flash bulbs indispensable. Margaret Bourke-White, Otto Hagel, Hansel Mieth, Carl Mydans and the other LIFE photographers rely on flashes to help them get the dramatic pictures their editors demand.

But speaking of flash-light photography means a number of different things. Every newspaper photographer uses his Speed-Graphic with a flash at the side of the camera for a majority of his shots. The type of work under discussion, however, is of an entirely different sort. The flash is seldom, if ever, fired from the camera position, and more often than not the illumination comes from more than one bulb. In the case of several bulbs, they may or may not be of the same size. This technique is as practicable for the miniature camera as for the larger ones, with the long peak flash bulbs which are now available. To make striking, unusual pictures, the only requirements are ingenuity and a little common sense.

The reason for using more than one bulb, should be, of course, quite obvious. It is an outgrowth of the practice of flashing one bulb on an extension cord, thus putting the light where it is most needed. The flat lighting associated with news pictures is avoided in this manner. As I see it, the principal advantage of flash light over other forms of artificial light is the much greater amount of light given off by each bulb. In other words a very short exposure may be given, still keeping a small aperture. Most of my pictures made in this way require an exposure of $1/200$ th of a second at F:32. These figures are for cameras with between-the-lens shutters. With the Contax I have made good negatives at all shutter speeds from $1/50$ th to $1/1250$ th of a second, but the aperture is necessarily much greater—from F:5.6 to F:16—because of the comparative inefficiency of the focal-plane shutter when synchronized with flash bulbs. With focal-plane shutters, only



*Typical three-
bulb set-up*

bulbs of long flash duration, such as the Wabash Superflash, or the new G.E. wire-filled bulbs, are to be used.

Most synchronizers are now available, if not from dealers, on special order, with outlets for extension cords. I found no lighting set-up on the market satisfactory for my own purposes, so I was forced to make my own. However, the labor incidental to such a job is small, and is well repaid by equipment which can be depended on. I have found that the ordinary three cell battery case provided with most flash-guns may be relied upon to ignite up to five bulbs of the long peak variety, and as I never have need for more, my equipment is designed with this in mind. From the extra outlet in the battery case I run a short cord to the floor, where it is plugged into a base with several outlets. From this it is easy to make any set-up desired. In my case the bulbs are screwed into clamp-on reflectors of the ordinary kind. I use two or three lights for most pictures. Naturally, when using the extra outlet on the synchronizer, the socket at the top of the battery case is still available. This method of operating has the disadvantage of some expense, so is adapted primarily for professional photographers, to whom the production cost is not to be considered when good photographs are desired. However it is well worth understanding by the amateur, because of the superlative quality of the pictures obtained.

The practice of using a flash at the end of a long extension cord can be very useful in daylight, when it is desired to lighten up a shadow area. In such a case the flash takes the place of a reflector. The exposure is determined by balancing the known brightness of the flash with the known brightness of the natural illumination. In other words, should an outside



"Camp-fire"

Rex Hardy, Jr.

subject call for an exposure of $1/100$ th of a second at $F:16$, and you know that you can get a good negative with flash exposures at $1/100$ th of a second with the light fifteen feet from the subject, the flash must be set at that distance. Should the outside exposure be necessarily longer than that given here, and the flash data remain the same, it is obvious that the part of the picture lighted by the flash will be overexposed, unless the flash is placed still farther from the subject. The reverse of this is as true, but often these facts can be turned to the advantage of the clever photographer in illustrative work, where the mood indicated for the finished picture will call for use of the flash in other than the normal manner.

I believe that experience is the only guide to correct exposure when using flash illumination. Because of the difference in efficiency of different shutters and different bulbs, the problem becomes one of individual proportions. The variables are, type of bulb, type of film, type of shutter, make of synchronizer, number of bulbs used, and distance of bulbs from subject, not to mention the ordinary factors of shutter speed and diaphragm aperture.

As in other forms of photography under artificial light, the exposure must be calculated from the amount of light directly illuminating the subject, and lights used merely for accents, such as backlights, should not be allowed to enter the calculations. Using flashes the photographer must learn to accurately figure his illumination. In other words, he must plan just what part of the lighting ensemble is to come from each light. This is merely a matter of using the common sense referred to in the second



"Benny Goodman"

Rex Hardy, Jr.

paragraph. For those who do not feel sure of results, it is good practice to light the scene first with flood bulbs, placed in the fixtures that are later to be occupied by the flashes. If more than one size flash is to be used, naturally more than one size flood should be used as well. A principal source of failure in flash pictures is a "hot-spot" made by brilliant reflection of light. This may come in carefully planned pictures, from such sources as mirrors, windows, and eye-glasses. Light will reflect from any object at the same angle at which it strikes. Merely think of reflecting objects as the cushions of a billiard table, and you have it. The lights must be so



"Chemist"

Rex Hardy, Jr.

Courtesy, Stanford University

arranged that no reflection is allowed to strike the lens. A lens shade is useful in cutting down this hazard. If in doubt, try it with floods first.

If conditions require it, fair pictures may be made with one flash, at camera position, if care is taken with the background. With the subject close to a light background, an unpleasant shadow behind the head nearly always results in the print. In the case of the Benny Goodman picture reproduced with this article, the subject was far enough removed from the walls so that no light reached them. Thus Goodman and his clarinet stand out sharply against the darkness.

The campfire picture is another made with one flash. The bulb was placed in an open socket (no reflector) at the end of a long cord. It was placed on the ground directly in front of the fire, and then screened by the backs of two men. The effect is authentic, and yet was made at $1/250$ th of a second at $F:8$, with the Contax. The writer has tried many a campfire picture, but results made this way have been far the best.

Both the above examples, and the picture of the young chemist were made with the Contax, with a Jacobson synchronizer. The young chemist required two bulbs, both somewhat to rear of the subject. The camera was hand held for these three pictures.

Lucius Beebe required three bulbs. This picture was made with a Zeiss Juwel on $3\frac{1}{4} \times 4\frac{1}{4}$ cut film, the camera being placed on a tripod for accurate composing. Lucius Beebe was photographed with two bulbs, behind and to the sides, to outline the figure, and one bulb directly in front, but at a greater distance than the side lights, in order to fill in what would otherwise



"Lucius Beebe"

Rex Hardy, Jr.

Courtesy "Life"

appear as deep shadow. To obtain the dark background, the picture being made in an ordinary New York apartment, the subject was placed near the entrance of the room, with his back to the room, and care was taken to prevent any of the light from falling on the walls. Consequently the figure received so much more exposure than the room itself, that the background printed black and unwanted details were eliminated.

Pictures made in this fashion become easy with a little experience, provided you keep track of results. Your technique should become standardized to the end that the finished picture is visualized before the shutter is released.

Cinema Section

Edited by

William A. Palmer

Amateur Sound Films

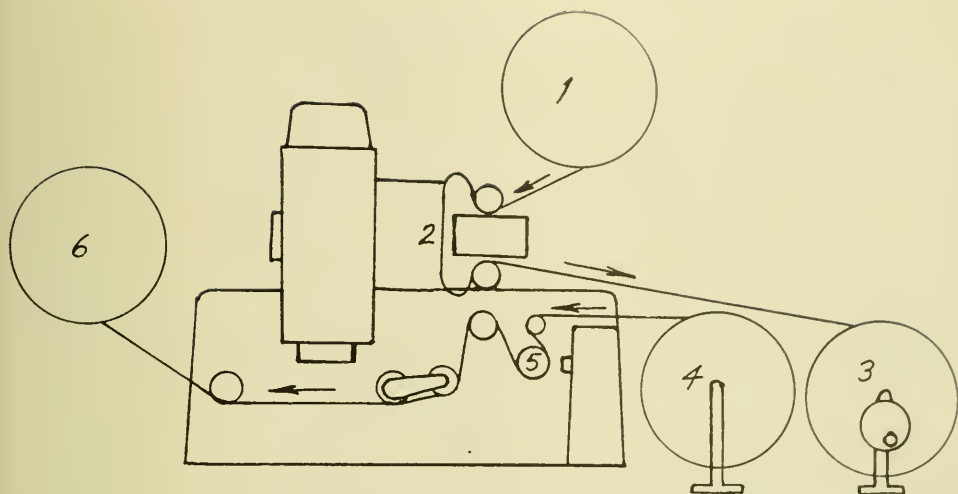
IN THE past we have discussed several methods of adding sound to regular silent films and thereby improve their audience appeal. The methods usually recommended for amateur use involve phonograph discs in some form and are synchronized within reasonable limits but usually not well enough for "lip synchronization." The three common procedures are:

1. A musical score played from standard phonograph records either with the aid of a dual turntable or by careful manipulation of the record changes with a single table. Such an accompaniment to a complete silent film is a valuable addition to the show but not necessarily an integral part of it. The sound in this case is purely background and factual information must be given by titles.

2. A voice commentary delivered through microphone and public address system by the operator of the show with or without the further aid of standard phonograph records "mixed" behind the voice. In this method the voice becomes an integral part of the film and is relied upon to give factual information and description of the subject matter in place of complete titles. Short titles are usually used to introduce sequences but the skill and timing of the lecturer is very important. When well done a presentation of this sort is every bit as satisfactory as a professionally recorded sound-on-film job. Each performance, however, requires the same care in handling the music and the announcer must be on his toes continually to maintain synchronism. The very fact that this method does require skill on the part of the operator makes it especially desirable for amateur use when a show should not be too "canned."

3. Specially recorded phonograph discs made on instantaneous playback or "acetate" material on which the commentator's voice and music from standard phonograph records are recorded. This method is the same in final effect as the second one above, the only difference being that only one perfect performance is required at the time of recording, after which the disc can be reproduced in synchronism with the picture as often as desired. Methods of holding the specially recorded disc in synchronism with the projector vary, but in any case the timing is only held to within a second or two of the ideal. The discs are usually recorded at the slow speed of 33 1/3 r.p.m. so that an entire 400 foot reel can be recorded on a 12 inch disc. "Lip synchronization" or any timing of sound and picture to the split second is of course impractical with sound on disc unless the turntable and projector are actually connected together by gearing as in the days of the early theatrical talkies.

In order to have infallible synchronism of sound effects and dialogue



Bell & Howell "Commercial"

- 1. Picture Film Supply Reel. 2. Picture Film Gate. 3. Picture Take-Up Reel.
4. Sound Film Supply Reel. 5. Sound Drum. 6. Sound Film Take-Up Reel.*

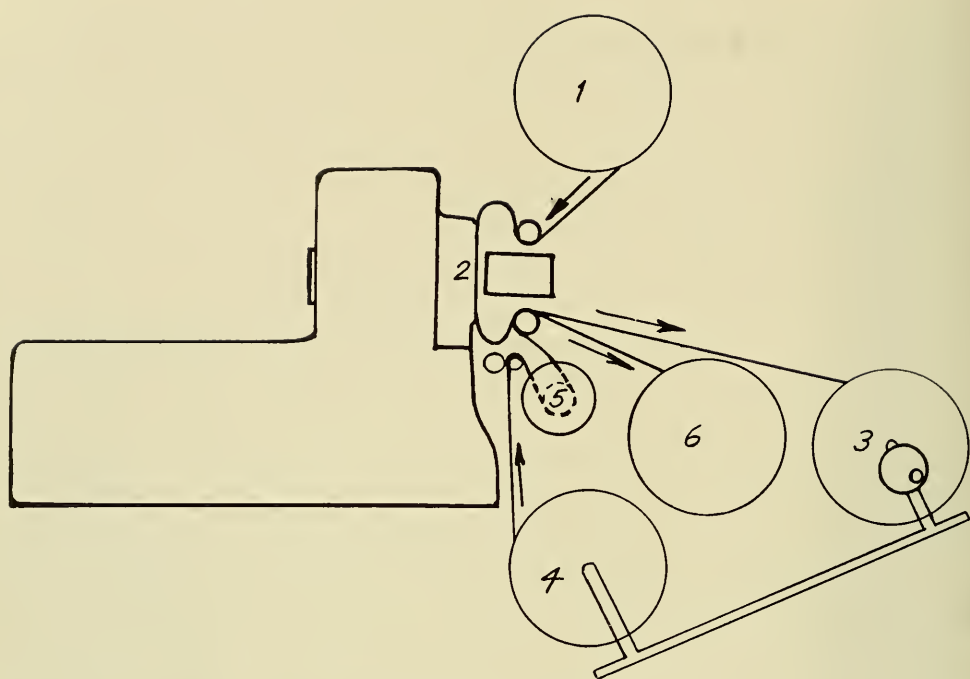
one must go to sound-on-film. Once synchronization with sound-on-film has been achieved, it is permanent and each performance will have the sound timed exactly as every previous one.

Sound-on-Film Made From Silent Film

Contrary to a common impression, it is not necessary to take pictures with a sound camera or on sound film when making a sound-on-film picture. There are cameras which take sound and picture simultaneously on the same film (the "single system") but by far the majority of professional subjects are made by the "double system" in which the pictures are made on ordinary silent film, and the sound track is recorded on a separate film to be later combined with the picture when a duplicate is made. Except when actual dialogue of persons in the picture is to be recorded, the sound is usually made at a time after the picture has been processed and completely edited as if it were a silent film.

The amateur, if he cares to, can take advantage of sound-on-film even though he does not own recording equipment. It is only necessary to prepare his silent film (which should be photographed at 24 frames per second instead of the usual 16 per second) and then go to a commercial studio equipped for direct 16mm sound-on-film recording to have the sound track made.

The method has many very decided advantages. It is possible thereby to obtain perfect synchronism which will not vary in performance. It is possible to correct mistakes made during the recording by editing the sound track and inserting a replacement word or sentence to replace the one "fluffed" whereas with a disc recording a mistake must stand unless the entire disc is made over. Synchronization can be shifted after the recording has been made if the timing of the performance was not ideal at the time of recording. The completed film can be shipped to a distant point without its "author" and there give a performance just as good as at home.



Ampro Models X and Y

1. Picture Film Supply Reel. 2. Picture Film Gate. 3. Picture Take-Up Reel.
4. Sound Film Supply Reel. 5. Sound Drum. 6. Sound Film Take-Up Reel.

Sound-on-film also has a decided disadvantage. The expense involved in making the complete job is a great deal higher than with a disc method. The usual steps in making a complete sound-on-film picture, in which the sound consists of post synchronized voice and music, are as follows:

1. The pictures are taken on ordinary silent film in an ordinarily silent camera set for a speed of 24 frames per second.
2. The pictures are edited completely and any opening, divisional or closing titles are made and inserted.
3. A script is written and timed with the picture so that it may be delivered smoothly while the picture is projected at the sound speed of 24 frames per second.
4. Any music or sound effects are chosen and rehearsed with the voice and picture until the performance can be given as desired.
5. A recording on sound film is made of a performance during which the picture is projected. The sound and picture films are both run at exactly 24 frames per second.
6. The developed sound track is matched with the picture, poor timing corrected, and any mistakes repaired.
7. A duplicate is made from the picture and sound track to yield a complete sound print having picture and sound track on the same film. (It is understood here that reversal film or Kodachrome has been used for the picture and the

duplicate is made by the reversal method. Sixteen millimeter negative-positive is no more satisfactory than in silent film work where dirt, scratches and coarse grain usually make it a poor second to reversal film and duplicates therefrom.)

Of the above steps, the last is one of the most expensive and, at least in the case of Kodachrome, somewhat disappointing because of a loss in picture quality over the original. No duplicate in color can quite come up to the smoothness and sharpness of the original although late ones are remarkably good, and it seems a shame to go through the expensive steps of sound-on-film only to end up with a picture quality slightly inferior to the sound on disc which makes use of the original picture film. (Please note here reference is being made specifically to sound-on-film for amateur use where showings are infrequent. Sound-on-film for commercial films or even silent film for commercial use *must be duplicated* in any event if the investment in the film is to be protected in the least. A commercial concern which puts considerable money in a film and then uses the master or original film for projection is certainly very foolish, for one careless threading can wipe out the investment.)

So we come to another system of sound film projection which has the advantages of sound-on-film and sound-on-disc combined.

Dual Film Projector for Sound

In most commercial film recording studios, just before the last step (7) above is done, the two matched films, the picture and sound track, are threaded into a special machine called variously according to manufacture a "moviola," "synchronizer," or "projector and dummy." In all these the operation is to run both films simultaneously, one mechanism projecting the picture while a second mechanism, geared to the first, reproduces the sound track.

Now it happens that this stunt of running two films simultaneously can be done very successfully on several standard 16mm sound-on-film projectors with but slight alterations. The two open or "un-blimped" projectors made by the Bell & Howell Company and the Ampro Corporation respectively, lend themselves particularly well to the adaptation and so they will be discussed in detail. Other projectors built into cases could be converted in a similar fashion, but it would be necessary to cut additional apertures through the cases and install rollers to prevent film scratching.

Illustrated in the sketches are the threading arrangements by which the Bell & Howell "Commercial" and the Ampro Model X & Y can be made to run two films. No alterations to the mechanism of either machine need be made; only two additional reel spindles need be fixed to hold the extra reels—400 foot size as indicated in the drawings. Larger reels could be used but their bulk would bring added problems of mounting the reels within working distance.

Although special reel arms can be made without much difficulty, the simplest solution to holding the two extra reels is to make use of a rewind set consisting of a geared rewind and a "dummy." These can be mounted with a minimum of carpentry in positions something like those shown, and the take-up of the picture film in each case done by hand turning of the geared rewind head. Of course, if one wishes to go further with special reel arms and arrange an additional belt drive for the added take-up reel such could be done.

An examination of the sketches will show the threading paths of the picture and sound films. On the Filmo, the picture threads with a "start" mark placed in the aperture, just as in a silent projector of the same make and is led to the

front to take up on the geared rewind spindle. The sound track is placed on a fixed or "dummy" spindle immediately in front of the projector, passed over the exciter lamp housing, around the little spring mounted roller, and then over the sound drum where a corresponding "start" mark is placed, then to the take-up as in regular sound film threading. It may be necessary to fix on little pads of velvet to keep the sound track from becoming scratched as it passes over the exciter lamp housing. The velvet can be held in position by strips of "scotch tape" and can then be removed and replaced at will by a clean piece.

With the Ampro, the threading of the sound track should be done first and is normal except that it passes from the supply reel below, up to the tension rollers. The picture film is threaded exactly as in the silent machine and the two films together pass over the bottom sprocket. The sound track takes up on the regular take-up spindle while the picture film is brought forward to take up on the hand turned rewind spindle. It may be necessary to adjust the clearance on the film guard for the bottom sprocket so that the two films will pass through without scratching. This adjustment can be made easily by someone familiar with the mechanism.

Dual film projection eliminates one of the costliest items in a sound-on-film job, that of making a combined sound and picture duplicate; it enables one to have the full quality of original color film with the perfect synchronism even of dialogue; it gives all the flexibility of sound-on-film in the way of editing and correcting errors in the sound track; it makes possible a better quality of sound with color pictures than sound on Kodachrome film, which has a relatively high "background" noise level. It is still more expensive than disc recording and necessitates the purchase of a sound projector, but sound projectors now are not a great deal more expensive than a silent projector plus a phonograph and microphone set up.

Questions and Answers

Question: Can a wide angle lens be obtained for 8mm. cameras?

Answer: Until recently, a wide angle lens for 8mm. cameras was thought to be impractical because of the extremely short focal length necessary. Bell and Howell, however, are now furnishing an attachment to their regular lenses which doubles the field and gives the same effect as a separate wide angle lens. This attachment at present is available for one make of camera only.

Question: What fluid should be used to clean color films?

Answer: The best advice for color film users is to keep the film clean enough so that liquid cleaning is unnecessary. Usually, running the film through dry velvet will remove most of the accumulated dirt providing the film has not become oil-soaked. When a great deal of oil gets on the film from over-oiled projectors, the proper cleaning is with straight carbon tetrachloride or Eastman cleaning fluid.

Question: What is the best average length for cine titles?

Answer: The general principle for titles should be, "the shorter the better." A ten-word title is a good average and in very few cases should the wording be more than twenty words. Longer titles will have to be made in "roller" fashion to keep the letters a readable size.



"If I Were King"

Francis Wu, Hongkong, China

First Award—Advanced Class

■ Mr. Wu has done a good job in arranging the spacing of the head with respect to the two hands, and by holding the hands down in tonal value, has succeeded in giving the head the desired dominance in the picture. Ordinarily we might object slightly to the lack of light in the eyes and to the posing of the right hand which causes the fingers to appear cut off at the knuckle, but with such dilapidated subject matter as this, the treatment seems rather in keeping. We cannot see that the title is very well tied in with the feeling of the picture. The subject seems to us to appear much too defeated and hopeless in his outlook to suggest any such attitude as the title expresses.

We do not maintain that subject matter such as this must necessarily be shown absolutely sharp or with fully literal detail. Such a rendition would reduce the effectiveness of the picture by cluttering it up with a lot of unnecessary detail, but we do think that just a little more sharpness might possibly prove advantageous.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ Graflex, Series B; 1 10 sec. at F4.5 on unspecified cut film in D-76; 11×14 " Chloro Bromide print in D-72.



"The Vigil"

John R. Hogan
Philadelphia, Pa.

diffusion through Misonne screen; dark areas
at the price of \$10.00 upon application to Camera Craft.

■ Mr. Hogan displays fine technical skill in his handling of this material. He most certainly understood that a minimum exposure was necessary in order to preserve the very delicate gradations in the water and to avoid blocking up of the highlights along the pathway of light. Even with such an exposure he does not entirely lose detail in the dark parts of the boat and figure because the scale here is quite short due to the highly diffused nature of the lighting. Notice also how very nicely a faint suggestion of sun behind the fog is preserved. This light area in the upper right section of the picture is of considerable help to the composition, for without it the large amount of space in the upper right would appear monotonous and unjustified. The picture makes excellent use of the very beautiful atmospheric effect.

Data: $2\frac{1}{4} \times 2\frac{1}{4}$ Rolleiflex; F3.5 Zeiss Tessar; $1/25$ sec. at F6.3 on Agfa Superpan in DK-20; 8 a.m. in August; no filter. 11×14 " print on Defender Velour Black, DL 11 in D-52. Slight held back in printing. Prints may be obtained



Lionel Heymann
Chicago, Ill.

■ We have heard it said that architectural subjects of this nature are very easy to photograph since the architect has really prepared the photographer's picture for him. On the other hand, architects are continually complaining that it is very difficult indeed to get a photograph which truly reflects the spirit or the feeling which the architect has tried to put into the building. At least we can realize that the point of view must be selected with great care for a subject such as this. Notice that Mr. Heymann has carefully preserved the identity of the emblem at the top of each spire. The reader will appreciate how unpleasant it would be if the camera angle resulted in these being confused with each other. We think that the treatment of the subject as a whole could have been a bit more vigorous, and that the dodging in of the two upper corners has been slightly overdone. It also helps matters if we trim enough from the left side so that there is no tendency for the eye to work down to the extreme lower left corner. We are taking

only about one-half inch off the 11×14 " print, but to our eye it helps the picture considerably.
Data: 11×14 " Bromide print.

Second Award

Advanced Class

Third Award

Advanced Class

Fourth Award

Advanced Class

■ Mr. Forrester has selected a very interesting aspect of a particular dance for this picture, and he has added a certain eerie quality to the subject matter by playing up the unusually large eyes of the woman. There is nice movement in the picture which is a result of the combination of oval shapes formed by the heads and the diagonal movement suggested by the position of the man's arms. It has been suggested that the picture could be improved by trimming enough from the right so that the elbow would cut that edge of the print. This does help to subdue the present rather unnecessary prominence of that elbow, but it seems to throw the heads a bit far to the right in the picture space (with this arrangement they need to be pretty well centered), and it also creates an enclosed area of background tone below the arm, which is all right as things are, but it becomes rather prominent if the trimming is resorted to. On the whole, therefore, we are inclined to feel that the picture is better if the present format is retained.

Data: 6x6cm. Rolleiflex. 1/25 sec. at F8, on E. K. Super XX by 3 Photofloods. 11x14" print on Gevaert Artona Rapid.



*George E. Forrester
San Francisco, Calif.*

Fifth Award

Advanced Class

■ It took a very quick eye to see and realize the possibilities of this subject matter. The idea is rather unique, and we think that Dr. Thorek has handled it very well indeed, particularly when one considers that it must of necessity have been a "grab" shot. Ideally, of course, it would probably help if the boat had been placed with the bow pointing in the general direction of the lower left corner, and the stern in the general direction of the upper right, for as things are now, this thrust of the boat is strongly toward the left side of the print and there is very little there to check this directional force. In fact, the line of the shore has a tendency to help it along. In the ideal arrangement suggested the thrust of the boat would be working against the thrust of the water. We cannot understand the reason for printing a very black border on two sides only of the picture. We do think that a black border might well be used all around the picture. It would help a little to check the



*"Repulsed"
Dr. Max Thorek, F.R.P.S.
Chicago, Ill.*

Data: 12½"x16½" Bromide print.



"Brush Cutters"

C. Stanton Loeber, San Francisco, Calif.

First Award—Amateur Class

■ Mr. Loeber has contributed some excellent things to this competition of late and has more than earned a promotion to the advanced class. We expect that he will be equally successful there.

This picture strikes us as a very intelligent and carefully planned piece of work. The sunlight coming through the trees is beautifully recorded, and the cart is placed just right so that it is given great prominence by the strongest beams of sunlight. The shadows cast by the cart and figures fill in the foreground very nicely, so that we have good solid tone values there, which help build up the feeling of the third dimension. The principal tree forms are nicely spaced and the same can be said for the grouping of the figures. Notice how important is the small highlight in the roadway at the extreme right. Without this small touch of highlight it would hardly be plain to the observer that the road swings to the right, and of course such an awareness is most important, for this swing to the right is an important factor in the movement of the eye through the picture space. Notice also how this movement is checked at the extreme right by the tree trunk which appears along the right side of the picture space. This picture has a poetic quality which is reminiscent of some of the fine work of Misonne, the great Belgian photographer.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Ensign Reflex with Bausch & Lomb Tessar 1/25 sec. at F4.5 on E.K. Panatomic X. $12\frac{1}{4} \times 15\frac{1}{2}$ " print on Defender Velour Black DL in 55D; toned in Barstone toner.

Second Award

Amateur Class

■ There has been so much photography of water lily subjects that a fresh approach to this material is particularly intriguing, and it appears to us that that is exactly what Mr. Beers has achieved with this picture. There is a very pleasing relationship between the isolated patches of lilies in the foreground, the reflection of the rushes, the elongated patch of lilies in the middle distance and the rushes in the background. The reflection of the rushes adds a good deal of interest value to the picture, and also helps to tie the two patches of lilies together. We think that there are two advantages to be gained in trimming about one-third of the height of the rushes away. Such trimming eliminates small highlights near the top of the print which have a slight tendency to pull the eye upward, and also varies the spacing of the principal elements in the picture a bit more than is now the case. As things are now, the vertical area occupied by the reflection of the rushes and by the rushes themselves, is about equal. We achieve, therefore, some additional variation in spacing by altering this relationship.

Data: $5\frac{1}{2} \times 7$ " glossy Bromide print.



"Water Lilies"

Roland Beers

Dallas, Texas

Third Award

Amateur Class

■ Mr. Rundle has certainly had a wonderful stroke of good fortune in discovering such a marvelously fine little model. Not only does he photograph beautifully, but this picture shows that he co-operates with the photographer in truly remarkable fashion. The picture tells its story simply and very effectively without the straining for effect which so often is evident in pictures of this kind. The arm in the foreground is not particularly well posed. If it could have been turned so that the width of the wrist is not so great, and if the fingers of the hand could have been extended slightly so that the fingers do not appear to be cut off at the knuckle, a more effective presentation could have been achieved. We feel that the picture is a bit crowded in the picture space. More space all around, but on the right in particular, would appear to be desirable. Notice that the right edge of the print is tangent to the curve of the ear. As a general thing, it is better to have the edge of the print cut in definitely or not at all.

Data: $3\frac{1}{4} \times 4\frac{1}{4}$ " Graflex; Agfa Triple S Pan in Agfa 17; 11×14 " print on Defender Velour Black I.



"Caught In the Act"

Richard Rundle

San Francisco, Calif.



Wm. R. Hawkin
Burlingame, Calif.

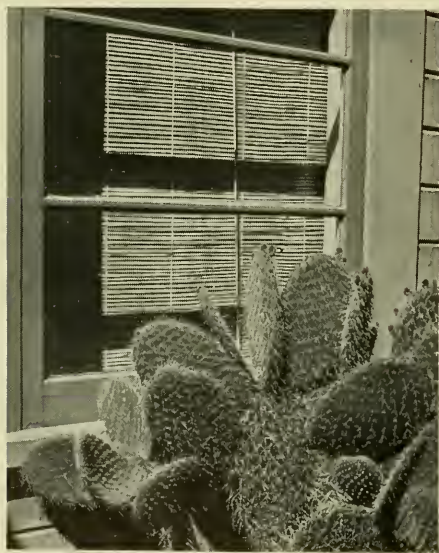
do with the fact that there are several places in which the eye is afforded excellent opportunity to follow one or the other of the tree branches out of the print. No trimming will really correct these two difficulties, but since the lower of the two branches which runs out at the upper right is the worst offender, we can partially correct these two conditions by trimming about an inch and a half off the right of the 8x10" print. Any more drastic trimming of course would so deplete the movement in the picture that we would have nothing but texture left. A black border might help a little bit in holding the eye in.

Data: Panchromatic film, ABC Pyro soda; 8x10" print on glossy Chloro Bromide. Prints may be obtained at the price of \$5.00 upon application to Camera Craft.

Fourth Award

Amateur Class

■ Detail and texture are beautifully rendered here and there is a nice feeling of movement and rather interesting form in this peculiar tree trunk. As we see it, the picture has two weaknesses. The three areas in which background is visible are rather equal in size and more or less symmetrically spaced, one on each side and one approximately at the top center. These factors together tend to cause these three areas to appear as "gaps" in the composition. That is, one wishes that they could be broken up into more diverse sizes and less regularly distributed. The other weakness which we have in mind has to



"Window, Cactus, Wall"

Paul Maimone
Oakland, Calif.

Data: 2 1/4 x 2 1/4" Korelle Reflex; Zeiss Tessar lens; Agfa Finopan in GD-X; 11x14" glossy print on Agfa Brovira in D-72.

Fifth Award

Amateur Class

■ Here again we find a picture in which texture and tone values are very beautifully rendered. The fully detailed rendering of the spiny cactus is particularly fascinating as subject matter. We cannot understand the photographer's reason for including so much of the window. As things are, interest value is rather too equally divided between the cactus, which should, of course, be the dominating element, and the window. For our eye, the picture is greatly improved if we trim from the top until all but the lower section of the window is eliminated. By trimming so that the cross piece which forms the upper edge of the lower section of the window is just included in the picture space, we can use this horizontal line as a check against the vertical elements in the window. We would also trim in from the right to the edge of the window frame so that the strong shadows formed by the wall boards in the upper right area are eliminated. Although we have trimmed away a great deal, nothing which is essential to the success of the picture has been eliminated.

Monthly Competitions

Scoring for Club Trophy Cups

The following won prizes for their clubs in the Advanced Class: Lionel Heymann and Dr. Max Thorek, for the Fort Dearborn Camera Club; John R. Hogan for the Photographic Society of Philadelphia; and George E. Forrester, for the Photographic Society of San Francisco.

The following won prizes for their clubs in the Amateur Class: C. Stanton Loeber and Richard Rundle, for the California Camera Club; Roland Beers, for the Dallas Pictorialists; and Paul Maimone, for the Miniature Camera Club of Oakland.

The following prize winners have no club affiliations: Francis Wu and William R. Hawkin.

FINAL STANDING OF CLUBS

Large Clubs Advanced Class

Fort Dearborn Camera Club.....	58
Indianapolis Camera Club.....	11
Fotoklub Zagreb.....	9
Fotoklub Ljubljana.....	8
Pictorial Photographers of America.....	6
Miniature Camera Club of Oakland.....	5
Photographic Society of Philadelphia.....	4
Los Angeles Camera Club.....	3
Manhattan Camera Club.....	2
Photographic Society of San Francisco.....	2

Small Clubs Advanced Class

The Pack Rats.....	18
Yellow Springs Camera Club.....	12
E.P.I.C. Pool.....	5
Aremac Camera Club.....	3
The Camera Clique.....	2
Aluminum Camera Club.....	1

Large Clubs Amateur Class

California Camera Club.....	25
Camera Club of Richmond.....	11
Detroit Camera Club.....	11
Cleveland Photographic Society.....	7
Miniature Camera Club of Oakland.....	5
Photographic Society of San Francisco.....	4
Amherst Camera Club.....	2
Indianapolis Camera Club.....	1

Small Clubs Amateur Class

E.P.I.C. Pool.....	13
Dallas Pictorialists.....	16
Signa Phi Nothing.....	5
Pictorial Camera Club of San Antonio.....	3
San Jose Camera Club.....	3
Vancouver Photographic Society.....	3
Florida Camera Club.....	2
Fresno Camera Club.....	1
Midwood Camera Club.....	1
Sierra Camera Club.....	1

Contributing Clubs for the Year

*Aluminum Camera Club (New Kensington, Pa.)
 *Amherst Camera Club (Mass.)
 *Aremac Camera Club (San Francisco)
 Bell Camera Club (Chicago, Ill.)
 Bombay Kodak Fellowship (India)
 Calgary Photographic Society (Canada)
 *California Camera Club (San Francisco)
 Camera Art Club (New Westminster, Canada)
 Camera Art Club (Beeville, Texas)
 Camera Art Group (Bombay, India)
 Camera Clique (Denver, Colo.)
 Camera Clique (St. Louis, Mo.)
 *Camera Club of Richmond (Va.)
 Charlotte Camera Club (N. C.)
 Chat City Camera Club (Danbury, Conn.)
 Cincinnati Camera Club (Ohio)
 Cleveland Camera Clique (Ohio)
 Cleveland Camera Guild (Ohio)
 Cleveland Photographic Society (Ohio)
 Connecticut Camera Club (Hartford, Conn.)
 *Corona Camera Club (Calif.)
 *Dallas Pictorialists (Texas)
 Dayton Photographic Society (Ohio)
 Denver Lensmen (Colo.)
 *Detroit Camera Club (Mich.)
 Detroit Miniature Camera Club (Mich.)
 *Edinburg Camera Club (Texas)
 E.P.I.C. Pool of San Francisco
 Florida Camera Club (Tampa, Fla.)
 *Fort Dearborn Camera Club
 Fotoklub Ljubljana (Jugoslavia)

*Fotoklub Zagreb (Jugoslavia)
 Fresno Camera Club (Calif.)
 Glendale Camera Club (Calif.)
 *Glenwood Camera Club (Philadelphia, Pa.)
 Golden Empire Camera Club (Calif.)
 Greater Pittsburgh Photographic Society (Pa.)
 *Green Briar Camera Club (Chicago, Ill.)
 *Harrisburg Camera Club (Pa.)
 Indianapolis Camera Club (Ind.)
 Jefferson City Camera Club (Mo.)
 Kamera Kranks Klub (Durham, Calif.)
 Kilgore Camera Club (Texas)
 Knickerbocker Village Camera Club
 Knoxville Camera Club (Tenn.)
 Lahore Camera Club (India)
 La Porte Camera Club (Ind.)
 Lens Hawks (New Ulm, Minn.)
 Lexington Camera Club (Ky.)
 Light & Shadow Club (San Jose, Calif.)
 Litz Springs Camera Club (Pa.)
 Long Island Photographic Society (Flushing, N. Y.)
 Los Angeles Camera Club
 *Manhattan Camera Club (N. Y.)
 *Marin Camera Club (Calif.)
 *Midwood Camera Club (Brooklyn, N. Y.)
 Miniature Camera Club of New York
 *Miniature Camera Club of Oakland (Calif.)
 Missoula Camera Club (Mont.)
 Montavilla Camera Club (Portland, Ore.)

(Continued on page 593)



Club Trophy Cup 1939

THE WINNERS

*Large Clubs—Advanced
Class*

**Fort Dearborn
Camera Club
Chicago, Ill.**

*Small Clubs—Advanced
Class*

**The Pack Rats
Pasadena, Calif.**

*Large Clubs—Amateur
Class*

**California Camera Club
San Francisco, Calif.**

*Small Clubs—Amateur
Class*

**E. P. I. C. Pool
San Francisco, Calif.**

The End—The Beginning

For the sixth time we reach the annual conclusion of the scoring for the Club Trophy Cups. Identical gold cups are awarded to each of the four winning clubs listed above.

Scoring for the 1940 Club Trophy Cups begins with the January issue, the judging for which takes place December 1st. Prints are judged on the first day of each month following. Clubs should remember that consistent submission throughout the year is the secret of success.

SUMMARY OF COMPETITION RULES

1. Open to all, amateur or professional, club member or non-club member.
2. Closing date 1st of each month.
3. Place technical data, club membership if any, and selling price, if desired, on back of print.
4. No entry fees or blanks required.
5. Stamps must be enclosed for return of prints.
6. Full explanation will be sent free on request or may be seen on Page 581 of December 1938 issue, or in the forthcoming January issue.

(Continued from page 591)

Monterey Peninsula Camera Club (Pacific Grove, Calif.)
Nanticoke Camera Club (Pa.)
Newport News Camera Club (Va.)
Newton Ring Club (Pelham, N. Y.)
Niagara Falls Camera Club (N. Y.)
*Oklahoma Camera Club (Okla.)
*Pack Rats (Pasadena, Calif.)
Paris Camera Club (Texas)
Photographic Society of India
*Photographic Society of Philadelphia
*Photographic Society of San Francisco
Photo Pictorialists of Springfield (Mass.)
Photo Section, Pittsburgh Academy of Arts & Science (Pa.)
*Pictorial Camera Club of San Antonio (Texas)
Pictorial Fellowship of Long Beach (Calif.)
Pictorial Photographers of America
Portland Camera Club (Maine)
Redlands Photo Pictorialists (Calif.)
Rhinelander Camera Club (Wisc.)
*Riverside Pictorialists (Calif.)
Rothschild's Camera Clinic (Los Angeles, Calif.)
Saginaw Camera Club (Mich.)
*Salt Lake Camera Club (Utah)
San Diego Miniature Camera Club (Calif.)

*San Jose Camera Club (Calif.)
Santa Barbara Camera Club (Calif.)
Schenectady Photographic Society (N. Y.)
Shorewood Camera Club (Milwaukee, Wisc.)
Signa Phi Nothing (Sacramento, Calif.)
*Sierra Camera Club (Sacramento, Calif.)
*Silv-O-Lite Camera Club (Goshen, Ind.)
Sketchawaug Camera Club (Springfield, Vt.)
Skyline Camera Club (Waynesboro, Va.)
Solano Camera Club (Fairfield, Calif.)
Sonoma County Camera Club (Guerneville, Calif.)
Springfield Camera Club (Ill.)
Springfield Photographic Society (Mass.)
Taft Camera Club (Calif.)
*Toledo Camera Club (Ohio)
Troy Photographic Society (N. Y.)
U. C. Camera Club (Berkeley, Calif.)
University of Florida Camera Club (Gainesville, Fla.)
*Utica Camera Club (N. Y.)
*Vancouver Photographic Society (Canada)
Washington Pictorialists (D. C.)
Wilshire Camera Club (Los Angeles, Calif.)
Yellow Springs Camera Club (Ohio)

*Denotes clubs competing this month.

Correspondence*

What Is Good Photography?

Dear Sirs:

May I as a fellow editor sympathize with you in the terrible jam into which you have got **Camera Craft**. Whatever are you going to do? Here were Edward Weston's articles on photographing in the desert—they were very good ones. But in the two articlese on "35 Years of Photography," Mr. Weston has not only written the clearest and most honest comments on portrait photography that I have ever read, but in giving those comments an autobiographical background, by letting us see into the mind of an honest worker confronted with "commercial" requirements he has produced a work of real literature. I have read those personal passages at least four or five times. They are not only full of what is titled "human interest" but they are exceptionally good writing. Weston makes himself live for us. That man could, I bet, become as eminent as a writer as he already is as a photographer if he wished to.

And so you see your position: what to give us next if you wish to keep up your standard. You have certainly set yourself a pretty high mark. Possibly you had better keep Weston writing for you.

One thing that struck me in his articles and that is that he is not a consistent "f:64" man but likes a landscape as well as a photograph that is not too sharp. I wonder if perhaps he is less sectarian here than Roi Partridge who does, if I may say so, in his November article, "What Is Good Photography," seems just a little sectarian. Why not a little loss of sharpness in the back-

ground if it is not too pronounced? What disturbs me in Partridge's article is that it is based primarily on matters of taste and yet he is not content with appealing to taste but uses arguments. For instance:

"It is only logical that any instrument should be put to its highest possible use. An astronomer who did not obtain the utmost from a telescope . . . would be a poor scientist. A microscopic technician who did not fully utilize the magnifying power of his instrument would not be worth his salt."

Well, it happens that I once had a microscope, and its three objective lenses were unscrewable the one from the other so that on days when I did not need salt I could use it at a lower magnification.

Also a friend of mine has an automobile and I suggested that if Mr. Partridge's argument were sound he should never drive the car at less than its full capability. Before accepting the suggestion he asked me if Mr. Partridge would be responsible for any fines or damages he piled up. As I did not know he has not yet made the experiment.

At that I think Mr. Partridge is about 95 per cent right. But if glossy paper offends you, if you have a high key picture, and if, printed on matt paper it happens to look like an engraving or some other form of hand made work of art, I do not think you should condemn the picture on that account. I would only condemn a photograph that looked like an etching or lithograph if it had been deliberately made to look that way by doing things to it over and above the normal photographic processes.

*Readers are requested to add a postscript to letters intended for this department, expressly granting permission to publish, and are urged to write as briefly as possible.—Ed.

I recently showed a friend a fairly large contact print made on self-toning P. O. P. He had never seen one before and remarked "What's that, a bromoil?" Well, I have not discarded the picture just because it accidentally or to one person looked like something that itself looks like an engraving—or whatever a bromoil is supposed to look like.

Sincerely yours,
LLEWELLYN JONES.

Boston, Mass.

Dear Sir:

The article entitled "What Is Good Photography," by Professor Roi Partridge, should be preserved for future generations.

It will serve as a commentary on the crazy period through which the world is now struggling.

To use a favorite expression of one of my neighbors, Professor Partridge "knows so damn much that aint so."

Near the end of his article he raises the question: "Where is photography going?" Well, if we follow the professor's teachings I know where it is going—and it will not like it when it gets there.

Allow me to suggest that the name "f 64 school" be changed to the "1890 school" and it would be historically accurate.

Sometime I would like to do an article for you entitled: "What Is Good Photography?"

Sincerely,

BENJAMIN WALLACE DOUGLAS

Trevlac, Ind.

Dear Sir:

I cannot agree with a recent rather pedantic article that photographers are not open to constructive criticism. Possibly some beginners may be this way but the ones who have made a name for themselves by their own work, are always ready to try new methods and adopt them, if proved worthy.

Being a serious minded lot as well as capable and having achieved their honors by study and hard work, they are not easily affected by new fads and isms. They probably know more about what art is than their critics, especially those who have never done any photographic work worth mentioning.

Also, why do not these critics judge photography by the work of the few real artists doing it? The same as they would painting, instead of the mass of beginners who have not yet found themselves.

Photography seems particularly susceptible to new fads, perhaps because so many workers are new in it. Just now it is going through its latest spasm with vociferous backing, by destroying values. Pale blue sky is shown jet black; glimmering golden sunshine as white paper and shadows without detail. Everyone's work looks alike and is popular because it is easy, a smattering of photo technique being all that is necessary.

Now they are even talking Surrealism, started by its originator, I am told, as a practical joke; it's at least kind to think so.

A reasonable attitude would be that photography is a very versatile medium and all styles have their place if well done.

As for the statement that photos are copies of paintings, one must have a very vivid imagination to be able to compare a monochrome picture with a colored one.

The statement that an artist honored in one period is not thought much of in another, is interesting and only goes to prove the whole thing is a matter of personal opinion, a good thing to bear in mind when giving one's own.

When photography started, Art Galleries refused to admit it as being purely mechanical, but when a group of artists made their pictures on Platinum, Gum, Carbon and Bromoil, the Art Galleries admitted it was art and opened their doors to photography.

Arnold Genthe stands out as a great photographic artist and many others have won similar honors by the same methods. What has happened that all this highly thought of work is suddenly classified as adolescent?

If the article referred to is correct in its deductions, then it might be well for us all to scrap our cameras and get some tin and a pair of shears and make tin statues as they had on Treasure Island, then when you got tired of one the tin could be used over again, which would have the advantage of being economical, if nothing else.

Sincerely,

G. H. S. HARDING

San Francisco, Calif.

Dear Sir:

After carefully reading this month's article "What Is Good Photography?" no one can doubt Mr. Roi Partridge's critical, artistic understanding. It is probable that most readers will thoroughly agree with all he says up to the point where he discusses "photography."

At this point, however, we begin to protest the injection of dicta—the stating of personal opinion as fact, the attempt to impose restrictive rules of photographic technique, and the limiting of the artistic creative photographic elements to "form, line and texture."

There are Laws of Art, and laws in general cannot be broken without penalty. But "rules are made to be broken" when expediency demands. Self-imposed rules of technique, we are convinced, can be waived and altered in order to achieve the *summa bonum* of photography—the final picture, in all its richness of idea and impression.

The creative photographer is not enslaved by rules of technique. If he were, then photography would become as interesting as a "three finger exercise" in exposure, development, and printing, **without variations.**

Operating under such restrictive rules, the photographer's originality, and interpretation of mood, idea, or impression are stifled and smothered. In the realm of Music, he would have more latitude of expression, if he were an old-fashioned mechanical piano, since, even its manufacturers admitted the mechanical limitation when they beneficently endowed their instruments with levers permitting at least some amount of post-factual control. The fundamental element of Music, namely interpretative human rendition, could not be fully expressed and the player-piano is no longer in vogue. The analogy, we believe, is close, because the small but vociferous group of "purists" will someday realize that the "flowing and ebbing stream of life cannot be confined to pigeon-holes."

In Mr. Partridge's words we heartily con-

cur: "Positive statements about art are difficult to make and are in danger of being disproved as fast as they are made." We think that Mr. Partridge would be the first to admit the same of What is Good Photography.

Yours very truly,
GEORGE E. FORRESTER

San Francisco, Calif.

Dear Al:

On the basis of three prints in "Camera Craft's" monthly competition—I've seen no other reproductions elsewhere—Mr. Roi Partridge is given as a photographic authority.

Of course, there are coaches who never played football, Salon judges who never made a Salon print and art critics who never touched a canvas.

No one questions Mr. Partridge's standing as an etcher nor as a teacher of art. But many do question him as an authority on things photographic.

His bitter tirade against Salons shows amazing unfamiliarity with the subject. One actually wonders if he ever saw a Salon.

The man whose reputation has been made by doing rather than by talking—or writing—is the man of considerably greater authority. Sophomoric logic and pedagogic belligerency are not necessary to him. His is a more tolerant outlook.

He knows that Weston did do his bit in the advance of photography by introducing sharpness at a time when soft focus and the imitation of painting were the vogue.

He knows that F:64ism was but an apeing of an older Continental phase and that its existence was predicated on the fact that most F:64ers were professional photographers, who, perforce, must produce "sharp and shinies" for the commercial demand. Hence their worship of glossy papers and celery crisp sharpness.

He knows that photographic beliefs change, just as well as does Mr. Partridge.

But he would not state with the final and ultimate positiveness of an earthquake that glossy is the one and only paper. Nor would he state with equal conviction that there is but one worthwhile form of photography—"sharp and shiny."

If photography is a hobby, the hobbyist

should have the privilege of doing as he pleases. If he likes bromoids, fuzzy-wuzzies, paper negatives or sand blasted prints, that's his affair.

It is up to no one, no matter how sincere his convictions, to attempt the cramming of those convictions down anyone's throat.

Actually the "sharp and shiny" boys are in the adolescent stage. Some grow up and some don't. If their growth stops there, they remain technicians and nothing else. That's the easy part of photography.

To develop the art of composition, the feeling for form, the ability to create the illusion of third dimension on two-dimensional paper is something far more difficult. That is where esthetics enter.

Give any average high school kid just one year's instruction; give him an 8 x 10 camera, a tripod, the sharpest lens money can buy and a gross of glossy paper. Give him plenty of telephone poles, fire plugs, fire escapes and garbage cans to photograph—and that kid will bring back such exquisite examples of what Mr. Partridge considers fine photographs, that even Mr. Partridge will be thrilled, for, as he has emphasized, subject matter means nothing—only form. Sounds kind of cuckoo, doesn't it?

Of course, they won't be pictures. They won't be the things Christine B. Fletcher creates, nor Leonard Misonne, the great Belgian, nor Dr. Julian Smith of Australia. They'll be fire escapes, telephone poles and garbage cans.

Mortensen, Thorek, Fassbender and the rest of that host of photographers will be gone from the earth when the Partridges have their way. Exalted rubbish will be the photograph superb.

Gevaluxe, Cykora, Velour Black and Brovira will be no more. Photography will be "sharp and shiny"—but dull, oh, so dull. And the fun of photography will be gone.

Yours,

STAN LOEBER

P.S. This is really all in fun, Al. You and I know Partridge is a good egg. But do give the non-glossy boys a break once in a while. Mr. William Mortensen will write on the general subject under discussion in an early issue. Additional comment will appear in the January issue.—Ed.

Club Notes

Photographers in Philadelphia and vicinity will do well to plan a visit to the showing of the Fifth Annual Philadelphia Salon of the Miniature Camera Club of Philadelphia. This exhibition will be displayed at the Franklin Institute, Benjamin Franklin Parkway at 20th, during the month of December 1939.

Edward Weston has been honored again by a world famous institution, this time the ENCYCLOPEDIA BRITANNICA. Mr. Weston has been chosen, by this renowned publication, to rewrite the article on "Photographic Art" for a new printing of the Britannica.

Photolore, club bulletin of the Washington

Leica Club, has announced a ColorSlide Competition which this progressive group will hold at a November meeting. As we have noticed an increasing number of clubs are inaugurating contests of this type, the conditions of this competition should be of interest. Instead of judging individual slides, the competition will be based on the best set of fifteen slides or less. All slides must be bound between glass and they will be judged on Color Quality, Photographic Excellence, Pictorial Quality and Composition.

An exhibition of photographs by Brett Weston will be hung at the San Francisco Museum of Art, Van Ness and McAllister

San Francisco, Calif., beginning January 20, 1940. The show will be displayed for three weeks and all photographers in this area are urged to attend this important exhibition.

Two loan exhibitions are now available to camera clubs. The Berkshire Museum Camera Club, Pittsfield, Mass., has prepared a group of 18 prints selected from the members' best work during the past year. Write the above address for details. William Zerbe has selected for exhibition 34 prints from the work of students and faculty, of the Photographic Course at the Pace Institute. Applications should be addressed to Dean Alice Ottun, The Pace Institute, New York, N. Y.

Programs planned and published for the entire season have been introduced by two progressive clubs. The Rochester Camera Club, of Rochester, N. Y., and the Worcester Photo Clan, of Worcester, Mass., have both issued excellent detailed program schedules for their 1939-40 meetings. This seems to be a sound practice as it not only permits the membership to plan ahead for both meetings and contests but it also prevents the last minute scurrings and disappointments of the month to month method. This system also permits these clubs to obtain the pick of the possible programs and to schedule them for proper balance.

Three prize contests are being conducted in Philadelphia, Pa., sponsored by the Council of Camera Clubs, in cooperation with the

United Charities Campaign. These contests will serve a double purpose; first, as photographic competitions offering photographers many valuable prizes and, secondly, and more important, it will provide a pictorial record of the charity work of a great city. The various charitable institutions of Philadelphia will be thrown open to photographers on certain scheduled days. The contests are open to all amateurs and detailed sets of rules and entry forms may be obtained from the United Charities Campaign, 123 So. Broad St., Philadelphia, Pa. The contests begin at once so don't delay.

The Albany Camera Club, of Albany, N. Y., recently presented a program of unusual interest, through the cooperation of the Criminal Investigation Bureau of the New York State Police. The Bureau gave an excellent program explaining the application of photography to the solution of crime. Four of the Bureau's specialists explained various phases of the work. A program of this type would undoubtedly prove fascinating to any group of photographers and clubs in other localities may find their police departments willing to cooperate. Calling all Program Committees!

FORTHCOMING EXHIBITIONS

SEE NOVEMBER

CAMERA CRAFT

Will be published next in the January issue

Notes and Comments

The New Bee Bee Filette Negative File, announced by Burleigh Brooks, Inc., 127 W. 42nd St., New York City, offers an economical file for your negatives. It includes 100 transparent glassine envelopes (capacity 200 to 900 negatives depending on the film size), ruled numerical index and it is boxed in a hinged container. Price of this economical, large capacity file is only \$1.00.

The Chemical Supply Company announces with profound sorrow, the death of its founder and manager, Dr. Samuel Fox, on Thursday, October 12th, 1939. The Chemical Supply Company will continue business under the guidance of Earl Fox, who has been associated with his father for many years.

Photo-Art Greeting Card Sets, introduced by the Albert Specialty Co., of Chicago, Ill., offer a simple, economical way for the photographer to make his personalized Christmas Cards. These sets are available in two sizes. No. 1 outfit includes two masks, an embossing frame, roller and instructions and is priced at \$1.00. No. 2 outfit is similar to No. 1 but includes four masks and is priced at \$1.75. Everything is provided that is necessary to make your own cards using your own best negatives with the attractive masks included in the kits.

East Bay photographers are now being offered a series of photographic seminars by Normand Photo Service, 2153 Shattuck Ave., Berkeley, Calif. These thoroughly practical courses in photography, conducted by Roland Calder, are being held each

Wednesday evening from 7:00 to 9:00 o'clock. Immediately after the Christmas Holidays Normands will start other photographic seminars. Of particular interest will be a seminar on color photography, with the actual making of separation negatives, color prints, etc., being done under ideal laboratory conditions. Seminars are limited to eight students, and for any groups of four to eight Normands will be glad to arrange a course of study on any photographic subject, with a thoroughly competent instructor. Ask Normands about your photographic problems. To serve their customers better, the store is now open evenings from 7:00 to 9:00.

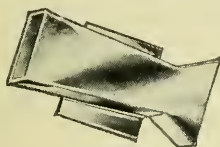
Kodachrome or Agfa Color Film transparencies of Western subjects are wanted for reproduction purposes by the H. S. Crocker Co., Inc., 735 Harrison St., San Francisco, Calif. The work must be clear and sharp, suitable for reproduction direct from the transparencies. The pictures must also be the type which the general public will go out of its way to get, take home, frame and keep. \$50 to \$150, depending on the merit and rarity of the shot, will be paid for exclusive reproduction rights to each transparency selected. Time limit is Jan. 15, 1940, so write Mr. Roland Meyer, at the above address, giving a list of transparencies you have available.

The Arkay Print Dryer, introduced by the Arkay Laboratories, Inc., 1570 So. First St., Milwaukee, Wis., is an efficient, quick operating aid for your darkroom. The Arkay Photo-Dry will finish gloss or double

weight matte prints in from 4 to 6 minutes. It has no hot spots and dries the prints evenly. A thermostatic control prevents overheating. Prints are quickly and easily inserted and dried, ready for mounting, 6 minutes after washing. The Arkay Photo-Dry is economically priced at \$9.95 (\$10.75 West of the Rockies). A descriptive circular is available upon request to the above address.

Dr. Charles Fine Grain Developer, a ready-to-use negative developer, offers many important advantages. It will develop any film in from five to eight minutes during the lifetime of the developer. One quart is sufficient to develop from 20 to 30 rolls of 35mm. or the equivalent. No increase in exposure time is necessary and temperature is not a critical consideration. See your dealer or write Dr. Charles Fine Grain Developer Co., Wilmette, Ill., for complete details.

The Saymon-Brown Direct Reading Exposure Meter is now distributed in the U. S. by Burleigh Brooks, Inc., 127 W. 42nd St., New York City. The Saymon-Brown Meter has no moving parts or separate charts and lens openings and shutter speeds are read off directly. Based on the extinction principle, the Saymon-Brown Meter has overcome the major objection to this type of

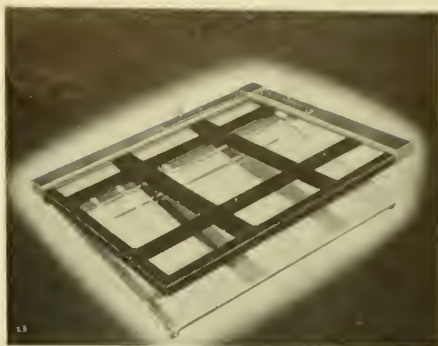


Saymon-Brown Meter

meter in that it is quickly and easily adjusted to the individual's eye sight. This adjustment is made only once. The Meter fits neatly into any standard camera shoe or if your camera has no shoe, a neat metal one is available for only 25c. The Saymon-Brown Meter is priced at \$1.85. See your dealer or write the above address.

The world's smallest practical photoflash lamp, "The Mighty Midget," has been placed on the market by the General Electric Co., Nela Park, Cleveland, Ohio. It is designed for use with all cameras except focal-plane shutter types. This new lamp is called the "Mighty Midget" because of its tiny size (smaller than a golf ball) and its man-sized flash (nearly a million lumens at peak of flash.) The lamp is wire-filled and is so tiny about two dozen will fit in an ordinary suit coat.

The new Diamond Dee Binocular, an improved 35mm. film viewer, has been placed on the market by the Diamond Dee Studios, 218 So. Wabash Ave., Chicago, Ill. A versatile instrument, the Binocular may be used for viewing single frames, with one eye piece, or stereo strips, when using the Binocular feature, which gives the very effective stereographic value. The Binocular Viewer may be used with the Tru View Library, the Novel Art Library, the Richard Library of Paris and the famous Hannelly Art Stereos, whose combined libraries represent thousands of stock strips on every conceivable photographic subject. Price of the Diamond Dee Binocular is \$2.50.



Princeton Easel

The Princeton Easel, a new precision built enlarging easel, has been introduced by the Price Industries Corp., 130 West 17th St., New York City. The Princeton Easel is the constant-center type, with masks made of four strips of heavy gauge formed steel, $1\frac{1}{2}$ inches wide. The four masks are controlled by two buttons, one which simultaneously controls the horizontal masks and the other the verticals. Thus, all four masks are automatically centered and adjusted by two simple operations. The easel permits the use of a full 11 x 14 sheet of paper allowing a minimum $\frac{1}{4}$ inch margin. Grooves are provided for standard sizes to aid setting. The baseboard is finished in silver lacquer, which is ideal for focusing and easily kept clean. The Princeton Easel is economically priced at \$12.75.

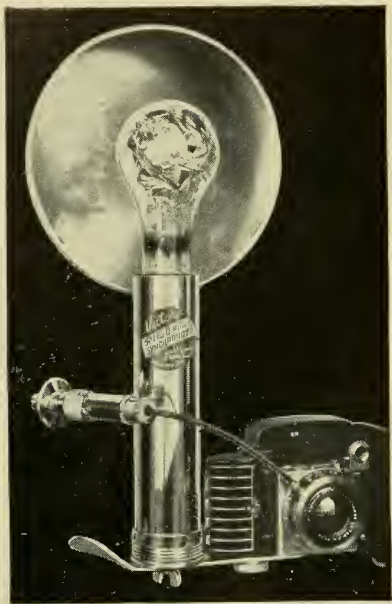
A daylight cartridge loader for 35mm. bulk film has been introduced by the W. W. Boes Co., Mutual Home Bldg., Dayton, Ohio. A complete descriptive bulletin is available. Write the above address for your copy.

A new Agfa Ansco Greeting Card Outfit has been introduced by the Agfa Ansco Corp., of Binghamton, N. Y. It includes six 5 x 7 masks on Reprolith film, which carry the design and message of the card. On the mask a 2 x 3 inch clear space is provided for your personal negative. Special $1\frac{1}{4}$ x $5\frac{1}{2}$ inch paper with deckle-edge is available in a variety of surfaces.

A special Christmas Gift Offer has been announced by Henry Herbert, 483 Fifth Ave., New York City. A Hyde Optical Slide Rule, price \$1.50, and a Mount-O-Graph, price \$3.75, are available in a special gift wrapping for a combination price of \$4.50.

A new low price has been announced on the Photrix "22" Enlarger, by the International Marketing Corp., 8 West 40th St., New York City. The reduction brings the price of this fine enlarger from \$69.50 to \$54.00. The new price was made possible by the enthusiastic reception of the Photrix "22" which enabled the manufacturers to introduce mass production methods.

All Risk Camera Insurance is offered by R. L. Muckley & Co., 435 No. Michigan Ave., Chicago, Ill. The policy offers world-wide coverage and may be obtained at the low rate of \$2.00 per \$100, with a \$5.00 minimum charge. Write the above address for complete details.



Victor Speed-O-Matic Flash Synchronizer

The new Victor Speed-O-Matic Flash Synchronizer has been announced by the James H. Smith & Sons Corp., Griffith, Ind., manufacturers of the famous Victor Lighting Equipment. The Victor Speed-O-Matic Flash Synchronizer synchronizes shutters that take cable releases. It is easily attached to any camera and is mechanical in operation, using battery current only for lighting the lamp. It is quickly adjusted to any shutter and operates accurately regardless of the degree of pressure upon the release. A polished aluminum six inch reflector is adjustable so as to center any size lamp, insuring efficiency. The Victor Speed-O-Matic Flash Synchronizer is priced at \$8.75. Descriptive literature is available from the above address.

Exceptional bargains are being featured by Wells-Smith, 71 E. Adams, Chicago, Ill. All sorts of photographic equipment, motion picture and still, are included and a free bargain list is available upon request to the above address.

16mm. and 8mm. cinefans are offered big savings in movie film by the Superior Bulk Film Co., 188 W. Randolph St., Chicago, Ill. They have the only 8mm. bulk movie film with daylight leaders. Write the above address for details of their service.

Eastman, Agfa and Dupont film is offered in bulk for 25 feet for \$1.00 by the Pacific Coast Film Co., 1510 North Sierra Bonita, Hollywood, Calif. Fresh, tested stock is featured and reloaded cartridges, 36 exposures, are offered 3 for \$1.00.

A new Still Camera Bargainingram No. 242, has just been published by the Bass Camera Co., 179 W. Madison St., Chicago, Ill. It includes thousands of bargains. A copy will be sent free upon request to the above address.

The Defender Photo Supply Co., Inc., has opened new offices in New York City, at 275 Seventh Ave. A comfortable efficient reception room and a streamlined stock room are two features of these attractive new quarters. Mr. Harold Dumont, New York manager, extends a cordial invitation to all photographic dealers and photographers to visit the new offices.

A giant gift catalog offering major savings in photographic goods has been published by the Norman-Willets Camera Center, 330 W. Washington St., Chicago, Ill. They also offer the Norwil Pyramid Savings Plan which is said to bring the consumer savings up to 35 per cent on first quality equipment. Send 10c for a copy of the Giant Gift Catalog and an outline of the Norwil Savings Plan. The 10c will be refunded on first order.

Minicam Negative Files, manufacture by the Minicam Co., Box 628, Compton, Calif., offer photographers the maximum in filing convenience and safety for negatives. The files consist of 25 pages of strong, transparent envelopes, stitched into pockets, with a conveniently located data record on each page; these are loose-leaf, so that additional file pages may be added; and are inclosed in an attractive, durable case. Prices range from \$5.50 to \$7.00, depending on the film size. A new improved file for 35mm. negatives is also available for \$7.50. This file has 40 alternating transparent pages for negatives and 40 white book pages for corresponding prints. Capacity is 36 negatives to each page. For further details see your dealer or write the above address.

The U. S. Camera Annual, 1940, will feature a special section of Edward Weston's photographs. The twenty-four pictures reproduced are selected from the work Mr. Weston did under the Guggenheim fellowships. Accompanying these splendid photographs, will be an article by Mr. Weston. This section alone will be worth the price of \$2.95, asked for this Annual, but this year's volume offers many other improvements over previous years. More than 300 large size reproductions will be included, with the biggest color section ever. Improved printing and binding will add to the value and permanency of the book. Also the 1940 issue will offer a greatly enlarged text section and, of course, complete data on every print. The U. S. Camera Annual, 1940, will be published December 1st, be sure and reserve your copy now.

A complete new Catalog of Da-Lite Screens and Da-Lite Photographic Accessories has been published by the Da-Lite Screen Co., Inc., of 2723 No. Crawford Ave., Chicago, Ill. This elaborate 48 page catalog not only gives a complete description of Da-Lite equipment but also gives valuable information on the important considerations in selecting the right screen.

Well known art critics were enthusiastic in their praise of Nicholas Haz' Exhibition of Abstract Color Photograms recently exhibited in New York City. Well received by the public too, this exhibition brings out clearly the importance of the interesting photographic work Nicholas Haz is doing. Mr. Haz is now conducting the Master School of Photography, at 30 Rockefeller Plaza, New York City.



